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INTERACTION BETWEEN NON-HANDICAPPED SIX AND

SEVEN YEAR OLDS AND PEERS WITH

SEVERE LEARNING DIFFICULTIES

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INSTITUTION  
and DATE

UNIVERSITY OF WARWICK

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CAM. 1



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INTERACTION BETWEEN NON-HANDICAPPED SIX AND  
SEVEN YEAR OLDS AND PEERS WITH  
SEVERE LEARNING DIFFICULTIES

A THESIS SUBMITTED TO  
THE DEPARTMENT OF PSYCHOLOGY  
IN CANDIDACY FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

(2 VOLUMES)

VOLUME 1

BY  
ANN LAURA LEWIS

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## CONTENTS

### VOLUME 1

	Page
Chapter 1: <u>Interaction between Young Children in Dyads</u>	
1.1 INTRODUCTION	1
1.2 YOUNG CHILDREN'S INTERACTIONS IN CROSS AGE DYADS	3
1.2.1 Choice of partner in cross-age groups.	3
1.2.2 The nature of cross-age interaction.	4
1.2.3 Contextual factors influencing cross-age interactions in the school context.	6
1.2.4 Helping behaviours in young children.	7
1.2.5 The ability of senior partners to adjust to junior partners in cross-age interactions.	9
1.3 INTERACTION BETWEEN YOUNG NON-HANDICAPPED (NH) CHILDREN AND CHILDREN WITH SEVERE LEARNING DIFFICULTIES (SLD)	11
1.3.1 Frequency of NH-SLD interaction.	11
1.3.2 Factors influencing NH-SLD interaction.	13
1.3.3 The influence of structure on NH-SLD interaction.	18
1.3.4 The nature of NH-SLD interaction.	21
1.4 CONCLUSION	22

Chapter 2: Young Children's Attitudes towards, and Descriptors of, other people, including Peers with Severe Learning Difficulties

2.1	INTRODUCTION	24
2.2	CHILDREN'S EXPRESSED ATTITUDES TOWARDS OTHER PEOPLE	25
2.3	ATTITUDES HELD BY YOUNG NON-HANDICAPPED CHILDREN TOWARDS CHILDREN WITH SEVERE LEARNING DIFFICULTIES	30
2.3.1	Affective attitudes towards SLD classmates.	31
2.3.2	Knowledge of SLD.	34
2.3.3	Methodological issues in the assessment of attitudes towards children with SLD.	35
2.4	CONCLUSION	38

Chapter 3: Discourse in Cross-age Dyads involving Young Children

3.1	INTRODUCTION	39
3.2	THE COMMUNICATIVE COMPETENCE OF YOUNG CHILDREN	39
3.2.1	Young children's abilities to adjust talk to listeners.	40
3.2.2	Speaker response to a failed message.	52
3.2	DISCOURSE IN DYADS INVOLVING YOUNG NON-HANDICAPPED CHILDREN AND PEERS WITH SEVERE LEARNING DIFFICULTIES	59
3.4	CONCLUSION	64

Chapter 4: Introduction to the Studies

4.1	INTRODUCTION	66
4.2	THE THREE STUDIES	66
4.2.1	The schools involved.	67
4.2.2	The mainstream classroom.	69
4.2.3	The integration project.	69

Chapter 5: Study 1: Non-verbal and Verbal Interaction in Dyads of Non-handicapped Children paired with Children with Severe Learning Difficulties

5.1	INTRODUCTION	72
5.2	METHOD	74
5.2.1	Subjects.	74
5.2.2	Materials.	75
5.2.3	Procedure.	78
5.2.4	Reliability.	81
5.3	RESULTS	82
5.3.1	Interactions with adults.	83
5.3.2	Role of NH children.	84
5.3.3	Interactees.	86
5.3.4	Mode of NH-SLD interaction.	86
5.3.5	Nature of NH-SLD contact.	86
5.3.6	Manner of NH child towards SLD partner.	87
5.4	DISCUSSION	88
5.4.1	Discussion of findings.	88
5.4.2	Limitations of the study.	91
5.4.3	Directions for the following studies.	93

Chapter 6: Study 2: Attitudes held by Non-handicapped  
six and seven year olds towards Peers  
with Severe Learning Difficulties

6.1	INTRODUCTION	94
6.2	METHOD	96
6.2.1	Subjects.	96
6.2.2	Materials.	97
6.2.3	Procedure.	102
6.2.4	Reliability.	103
6.3	RESULTS	104
6.3.1	Nominations of mainstream classmates with difficulties.	104
6.3.2	Attitudes towards children with SLD compared with attitudes towards mainstream classmates with difficulties.	106
6.3.3	Affective attitudes towards children with SLD.	116
6.3.4	Knowledge of children with SLD.	118
6.4	DISCUSSION	130
6.4.1	Discussion of findings:	130
	- Comparisons between attitudes towards classmates thought to have difficulties and attitudes towards children with SLD.	130
	- Affective attitudes towards children with SLD.	131
	- Knowledge of SLD.	134
	- Explanations for SLD in the light of Katz (1982) model of attitude development.	136
	- Salience of physical cues in descriptions of SLD.	146
6.4.2	Limitations of the study	150
6.4.3	Directions for the following study	153



Chapter 7: Study 3: Discourse between Non-handicapped  
six and seven year olds and Peers with  
Severe Learning Difficulties

7.1	INTRODUCTION	155
7.2	METHOD	158
7.2.1	Subjects.	158
7.2.2	Materials.	160
7.2.3	Procedure.	162
7.2.4	Coding of discourse samples.	164
7.2.5	Reliability.	181
7.3	RESULTS	183
7.3.1	Utterances to adults in integration sessions.	183
7.3.2	Identities of NH-SLD pairs.	185
7.3.3	Revision of data sample for statistical analyses.	185
7.3.4	Characteristics of talk by NH children to children with SLD.	
	- Utterance functions.	188
	- Reformulations and repetitions.	197
	- Exchanges.	204
	- Tutoring.	206
	- Dominance.	211
7.3.5	Comparisons between talk to partners with SLD and talk to HS partners.	228
7.4	DISCUSSION	242
7.4.1	Characteristics of NH children's talk with SLD partners.	242
7.4.2	Adjustments of talk by NH children for individual SLD children	245
	- Sensitivity to SLD partners' responses.	249
	- Recognition of the need for adjustments in talk.	251
	- Ability of NH children to make fine adjustments in talk.	256
	- Tutoring strategies.	259
7.4.3	Limitations of the study	264

Chapter 8: The Three Studies: Concluding Discussion  
and Suggestions for Further Research

8.1 CONCLUDING DISCUSSION	269
8.2 DIRECTIONS FOR FURTHER RESEARCH	274

VOLUME 2

Appendix 1: <u>Details of Samples and Raw Data</u>	278
Appendix 2: <u>Materials for Data Collection and Samples of Transcripts</u>	313
Observation schedule (Study 1)	313
Interview schedules (Study 2)	314
Sample interview transcript (Study 2)	319
Transcription sheet (Study 3)	327
Transcription conventions (Study 3)	328
Sample of NH-SLD discourse (Study 3)	329
Appendix 3: <u>Representativeness of 50U Samples in Study 3</u>	340
References	344

# LIST OF TABLES

Table	Page
1. NH children's affective attitudes towards: mainstream classmates with difficulties and known children with SLD.	107
2. Descriptors applied by NH children to mainstream classmates with difficulties and known children with SLD.	110
3. NH children's hypothesised causes of difficulties for mainstream classmates and known children with SLD.	115
4. References by NH children to one of five physical explanations for SLD.	120
5. Sequences of reformulations and/or repetitions in talk by NH children to children with SLD.	199
6. Types of reformulations in talk by NH children to children with SLD.	201
7. Types of exchange in NH-SLD dyads.	205
8. Paired t-tests (2 tailed) for major functional utterance categories in talk by NH children to children with SLD.	230
9. Open and closed questions in talk by NH children to children with SLD.	231
10. Paired t-tests (2 tailed) for use of reformulations and repetitions in talk by NH children to children with SLD.	234
11. Types of exchange in NH-SLD and NH-HS dyads.	236
12. Examples of main types of exchange.	236
13. Dates of sessions, location, activities and mean duration of paired activity (minutes) in Study 1.	278
14. Dates of semi-structured attitude interviews in Study 2.	279

15. Dates of sessions, location, activities and mean duration of paired activity (minutes) in Study 3.	280
16. Names, sex, dates of birth and chronological ages of non-handicapped children and children with severe learning difficulties, in Study 1.	281
17. Types of interactions by NH children during integration sessions (Study 1).	282
18. Types of NH-SLD interactions (Study 1).	283
19. Names, sex, types of sibling, dates of birth and chronological ages of non-handicapped children and children with severe learning difficulties, Study 2.	284
20. Non-handicapped children nominated by classmates as being "not very clever" or needing "a lot of help".	285
21. Raw data: First interviews, Study 2, re. "not very clever" classmates.	286
22. Raw data: First interviews, Study 2, re. classmates thought to need "a lot of help".	287
23. Raw data: Second interviews, Study 2, re. known children with SLD.	288
24. Raw data: Third interviews, Study 2, re. "not very clever" classmates.	290
25. Raw data: Third interviews, Study 2, re. classmates thought to need "a lot of help".	291
26. Raw data: Third interviews, Study 2, re. known children with SLD.	292
27. Names, sex, relative age of siblings (target and NH children only), dates of birth and chronological ages of target NH, SLD, and MS children involved in Study 3.	294
28. Duration of total recording (in minutes) of discourse for each target NH child, identity of SLD partner, sessions not recorded, and absences in each integration and MS session.	295

29. Utterances to adults in integration sessions.	296
30. Duration of recording (in minutes) of 50U samples and numbers of utterances in the 50U samples used for data analyses for each target child, for each integration and M5 session.	297
31. F ratios from ANOVA (3 way) for major discourse features.	298
32. Requests in talk by NH children to SLD/M5 partners.	300
33. Prohibitions, in talk by NH children to SLD/M5 partners.	301
34. Prompts in talk by NH children to SLD/M5 partners.	302
35. Monitoring in talk by NH children to SLD/M5 partners.	303
36. Questioning in talk by NH children to SLD/M5 partners.	304
37. Reformulations in talk by NH children to SLD/M5 partners.	305
38. Repetitions in talk by NH children to SLD/M5 partners.	306
39. Sequences of reformulations in talk by NH children to SLD/M5 partners.	307
40. Sequences of repetitions in talk by NH children to SLD/M5 partners.	308
41. Reformulations involving lengthening the utterance in talk by NH children to SLD/M5 partners.	309
42. Reformulations involving shortening the utterance in talk by NH children to SLD/M5 partners.	310
43. Tutoring strategies in talk by NH children to SLD/M5 partners.	311
44. Dominance in NH-SLD discourse.	312
45. Requests, monitors, reformulations and repetitions in talk by four NH children to partners with SLD in integration session 9.	342

## LIST OF ILLUSTRATIONS

Figure	Page
1. Interactions with adults as a percentage of total classroom observations in each integration session	83
2. Non-handicapped children's interactions with children with SLD as a percentage of total classroom observations in each integration session.	84
3. Non-handicapped children's solitary behaviour as a percentage of total classroom observations in each integration session.	85
4. Non-handicapped children's watching of children with SLD as a percentage of total classroom observations in each integration session.	85
5. Non-handicapped children's verbal interaction with children with SLD as a percentage of total classroom observations in each integration session.	86
6. Numbers of children giving negative or positive ratings of SLD children on each of six pairs of traits in second and third interviews (neutral ratings excluded).	117
7. Micro-recorder and microphones used to collect samples of discourse.	160
8. Jacket worn by non-handicapped children.	161

## SUMMARY

This thesis comprises three inter-related studies that have in common a focus on the nature of the behaviour of non-handicapped (NH) six and seven year olds in interactions with peers with severe learning difficulties (SLD).

Research into children's cross-age dyadic interactions is discussed and NH-SLD interaction is examined as a particular type of cross- (developmental) age interaction. This work provides the background to Study 1 in which each of ten NH children was paired with a child with SLD during fortnightly integration sessions over one school year. NH-SLD interaction increased over the first two terms and decreased slightly after this, a pattern which can be explained in terms of features which promote or diminish child-child interaction.

Study 2 focussed on changes in young NH children's attitudes towards children with SLD over a year of fortnightly NH-SLD integration sessions. These attitudes are considered in relation to work examining the development of attitudes towards other social groups. In particular, Katz' (1982) model of the development of racial attitudes is applied to attitudes towards children with SLD. Year-end interviews indicated that knowledge about SLD encompassed four different physical explanations of SLD: sensory-motor difficulties, sickness, young age or "bad brains". Although the NH children became more realistic about probable futures of children with SLD, the NH children remained, in general, confused about the nature of SLD. It is concluded that Katz' (1982) model provides a useful base for examining the development of attitudes towards children with SLD.

Concepts held about the listener will influence the nature of speech addressed to that listener and verbal NH-SLD interaction was the focus of the third study reported here. This study is set in the context of research on how young children address younger children, including tutees. Study 3 involved nine NH-SLD pairs of children whose verbal interactions were monitored over a school year of structured integration sessions. Study 3 found that, as in Study 1, NH children dominated NH-SLD interaction. This was evident in NH children's frequent use of requests and closed questions as well as in features such as speaking for SLD children. These characteristics were more frequent in the NH children's talk to SLD partners than in the NH children's talk to younger mainstream children. The issue of NH children's sensitivity, linguistically, to SLD partners is explored. It is suggested that while the types of reformulation of utterances by NH children to SLD partners were appropriate for SLD listeners, NH children often failed to recognise the need to reformulate utterances. This leads back to questions about young NH children's understanding of the nature of SLD.

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## CHAPTER 1

### INTERACTION BETWEEN YOUNG CHILDREN IN DYADS

#### 1.1 INTRODUCTION

It is relevant to consider the nature of interaction between the non-handicapped (NH) and children with severe learning difficulties (SLD) on two grounds. First, following the enactment of the 1981 Education Act, children with SLD are increasingly spending part of the school week in mainstream settings (Mittler and Farrell, 1988). Consequently NH children are more likely to meet children with SLD than was the case previously. NH children are also more likely to meet people with SLD in their communities through the development of "normalisation" for those people.

It is not known what proportion of mainstream primary schools integrate children with SLD. In the period immediately following the implementation of the 1981 Education Act a review of NMI reports on infant and first schools (Lewis, 1986) found that one out of the

forty-four schools (2.3%) for which published reports of inspections were available, integrated children with SLD. More recently, and from the point of view of SLD schools, Jowett et al. (1987) report that 80.0% of the SLD schools in their random sample of one quarter of all Local Education Authorities, had links with mainstream schools. 90.3% of these links involved children with SLD being taught for part of the week in mainstream classes. However, the incidence of integration of SLD children should not be over-stated; Jowett et al.'s figures may reflect the integration of a selected minority of children from SLD schools.

A second reason for examining the nature of NH-SLD interaction is that children with SLD are unlike "normal" peers and NH classmates have to apply strategies developed elsewhere to guide their interactions with SLD children. Examination of NH-SLD interaction may show that this conforms to what is known about children's cross-age interactions. Conversely it may reveal strategies used by NH children which are obscured or unused in interactions between the NH.

Hypotheses about the nature of interaction between young NH children and peers with SLD may be derived from the research literature concerning interactions in cross-age dyads. Cross-age dyads may be composed of children of either different chronological ages or, like same chronological age NH-SLD dyads, disparate developmental levels. A particular type of cross-age

interaction is helping behaviour and a variety of research in this area also has relevance for discussion of NH-SLD interaction.

## 1.2 YOUNG CHILDREN'S INTERACTIONS IN CROSS-AGE DYADS

Children's dyadic interactions have been studied in the context of both same-age and cross-age interactions. Studies of cross-age interaction in siblings have been excluded from this review as the familiarity of siblings with one another limits the generalisability of those findings to non-sibling, cross-age interaction.

### 1.2.1 Choice of partner in cross-age groups

In non-sibling, cross-age interactions in which children have a choice of partner, they prefer to interact with playmates who are similar to themselves in terms of ability, age, sex, race and cultural background (Hartup, 1976; Oden, 1982). Similarity of developmental level seems to be one of the most important variables in both greater liking for, and more frequent interaction with, the partner. This point would seem to indicate that NH-SLD interaction will be promoted if the children are of similar developmental, rather than similar chronological, levels. This comment will be considered

again later when research into NH-SLD interaction is reviewed.

Another influence on choice of partner in cross-age interactions in schools is the behaviour of the partner, specifically behaviours which staff rate as misbehaviours. NH children who exhibit misbehaviours in cross-age groups receive fewer interactions, and are less often chosen as friends in sociometric tests, than other children (Cantrell and Prinz, 1985; Spence, 1987). If children with SLD tend to exhibit misbehaviours then this may be an important factor in discouraging NH children from interacting with classmates with SLD.

#### 1.2.2 The nature of cross-age interactions

Young children respond differently to same-age and cross-age partners (Hartup, 1976, 1978; Lougee et al., 1977; Guralnick, 1986). Five, six and eight year olds have been found to be less sociable when they were in cross-age dyads than when they were in same-age dyads. Mixed age groups of three and four year olds have been associated with more solitary and less parallel or teacher-directed activity than in same-age groups. Hartup (1978) suggests that this is an indication of greater maturity in the cross-age context.

A variety of work on cross-age interaction has shown that this tends to be dominated by the senior partner in the interaction (Allen, 1976). The tendency

for senior partners to dominate cross-age interaction is reflected in the emphasis on curbing dominance by one partner in peer interaction in problem-solving tasks (for example, Light and Glachan, 1985). This point is illustrated by Hartup (1978) who reports that when six and eight year olds worked together in same and mixed-age triads, the single eight year old with two six year olds showed more initiative and a greater willingness to take on strategic roles than when the eight year old was in a same-age group. This was not the case for the six year olds. However, Hartup did not include a comparable situation for the six year olds in which they were the single senior member of a triad.

These findings indicate that interaction between NH children and SLD peers is likely to differ significantly from NH peer interaction and will place different demands on the NH children from the more usual (in the classroom) peer interactions. One might extrapolate from the findings reviewed above to conclude that NH children are likely to dominate same-age NH-SLD interaction and to be less sociable than in NH peer interactions.

1.2.3 Contextual factors influencing cross-age  
interactions in the school context

Classrooms encompass a variety of activities in which children interact with one another. The nature of these interactions is influenced by the type of activity in which the children are engaged. Among four to six year olds; house play, vehicle play, and reading activities, in which the teacher encouraged talk, have been found to promote associative and cooperative play. By comparison, work on specific tasks, such as painting or puzzles, increased the chances of solitary and parallel play (Rubin, 1982). These findings suggest that NH-SLD interactions will vary with the type of activity. It may be the case that, for example, domestic play encourages cooperative interaction whereas painting increases solitary behaviours. If cross-age dyads or groups are engaged in behaviours associated with solitary activity, such as painting, this may accentuate the tendency, noted above, for cross-age interactions to be more solitary than same-age interactions.

In the school context cross-age interaction may take place informally in playgrounds but more formally through established systems of children tutoring younger or less competent children (Allen, 1976; Topping, 1988). Programmes of child tutoring have been stimulated by experimental work showing greater increases in task

performance for children with cross-age tutors compared with same-age tutors (Hartup, 1978). In this situation the child tutor is explicitly helping the less able tutee and research on young children's helping behaviours has relevance for understanding of these interactions.

#### 1.2.4 Helping behaviours in young children

Help will not be proffered unless the potential child helper recognises a need for help. Several studies (for example, Borke, 1971) have shown that children as young as three years old are aware of other people's feelings. Four year olds recognise and respond to cues for help if these are clear and unambiguous (Pearl, 1985). However if these cues are incongruous then help is unlikely to be offered even in children of six to seven (Greenspan et al., 1976). These findings suggest that young NH children in NH-SLD dyads will give more help to the SLD partner if it is clearly indicated that help is needed; subtle cues for help will go unrecognised. This has implications for the ways in which SLD are explained to NH children. Children with SLD may appear to be physically normal for chronological age, in which case NH children may be confused about the reasons for SLD children's behaviour and therefore whether or not help is needed. This point will be considered again under examination of work on attitudes

to SLD children in Chapter 2.

Evidence about the extent to which recognition of the need for help is followed by action is equivocal (Hartup et al., 1983). Various helpee characteristics have been identified as associated with the probability of help being given. Help is more readily given to a younger child than to a peer, to a child of the same sex as the helper, to those who are seriously in need of help and in situations in which the helper feels competent (Peterson, 1983; Pearl, 1985; Sharpley and Rodd, 1985). No significant differences have been found between boys' and girls' willingness to help but help is more readily given in real than in hypothetical situations (Sharpley and Rodd, 1985). Young children (under seven years old) contrasted with older children, may be inhibited from helping through fears about their own inadequacies (Midlarsky and Hannah, 1985).

These findings have implications for understanding interaction between NH and SLD children. They suggest that interaction is likely to be optimised if NH/SLD children are paired with same-sex partners of similar developmental levels to themselves. If the emphasis in an integrated classroom is on helping the children with SLD then this is likely to be effective if the NH children: are paired with same sex, developmentally younger children; are given tasks which are well within their competence, and are helped to recognise when SLD children require help.



Conversely it may be the case that where this type of partnership occurs the NH children will tend to develop helping behaviours rather than "equal" partnerships with children with SLD. The NH will be more likely to develop friendships with children with SLD; on a par with friendships between NH children, characterised by, for example, spontaneously choosing to work or play together, if there is similarity in developmental level between the NH and children with SLD.

#### 1.2.5 The ability of senior partners to adjust to junior partners in cross-age interactions

Given that cross-age interaction differs from same-age interaction and that young children prefer to interact with others of similar developmental levels to themselves, do senior partners in cross-age interactions respond appropriately to their partners? This is a particularly important point if young children are used to tutor younger or less able tutees. Several writers have reviewed evidence which suggests that cross-age interactions do force accommodation to the younger child by the older partner (Hartup, 1978; Strain, 1984; Guralnick, 1986). Senior partners in cross-age dyads are able to both decide what is the developmental level of the partner and to adjust interactions appropriately to this. Hartup (1978) states: "When pre-school children

are not certain about the developmental status of another child, they find out!" (page 36).

Interestingly, work by Lougee et al. (1977) indicates that adjustment to younger partners in cross-age dyads of three to five year olds, was more consistent in relation to communication than social interaction.

This work suggests that NH children will be adept in finding out the "developmental status" of SLD interactees and responding appropriately to this. The specific issue of adjustment of speech to partner will be examined in Chapter 3. If NH children are able to adjust to SLD partners then the integrated classroom is a potentially rich base for the analysis of the nature of these adjustments and how they develop.

The following section examines findings from research into NH-SLD interaction in integrated school settings. These studies show the extent to which findings concerning cross-age interactions and helping behaviours apply to the specific context of interactions between NH children and peers with SLD.

### 1.3 INTERACTION BETWEEN YOUNG NON-HANDICAPPED CHILDREN AND CHILDREN WITH SEVERE LEARNING DIFFICULTIES

Research into NH-SLD interaction falls into broadly four groups focussing on: frequency of interaction, factors influencing this, the effects of structure, and the nature of interaction. Each of these groups of research will be discussed and related to the earlier review of developmental work on cross-age interactions and helping behaviours.

#### 1.3.1 Frequency of NH-SLD interaction

NH-SLD interaction has been widely researched at the pre-school level but relatively few studies have investigated how NH children in the early school years interact with classmates with SLD. Rose (1981) investigated playground interaction in a primary school, pre and post a NH-SLD tutoring programme while Voeltz and Brennan (1984) present summary data for interactions between the NH and a heterogeneous group of "severely handicapped" children after a "special friends" programme. Rose (1981) found that associative play increased from 14.5% of observed time prior to the

tutoring programme, to 38.0% of observations after an eight week tutoring programme. Similarly, cooperative play increased from 0 to 5.6% of observations.

Voeltz and Brennan (1984) report NH- "severely handicapped" interaction for 22 dyads from six different elementary schools but details of methodology are not given. 44.5 % of interactions by NH partners are described as "appropriate" (not defined), 23.5% as "cooperative play" and 15.0% as "parallel play". Data for solitary or isolated behaviours are not reported. It is not clear from Voeltz and Brennan's (1984) report how interaction changed over time although they claim that there were no negative effects of the integration of the severely handicapped pupils.

There is a more substantial body of work investigating NH-SLD interaction at the pre-school level. The greater use of pre-school than infant school settings for examination of frequency of NH-SLD interaction reflects both easier access to settings at that level (data have often been collected in University-based pre-school classes) and, as illustrated in Byrne et al's (1988) work concerning children with Down's syndrome, the more widespread incidence of integration at pre-school, compared with the early years of schooling. Many of the studies of NH-SLD pre-school interaction have shown children with SLD to be relatively isolated in unstructured settings (for example, Porter et al., 1978; Cavallaro and Porter,

1980; Sinson and Wetherick, 1981).

Several studies that have investigated interaction between NH pre-school children and classmates with mild, moderate or severe learning difficulties in unstructured settings have concluded that "like attracts like". NH children interact more with classmates who are developmentally similar to themselves, than with other children (Peterson and Harlick, 1977; Guralnick, 1980; Strain, 1984). However, not all studies at pre-school level have found a lack of NH-SLD interaction. This body of work will be examined to highlight factors thought to promote NH-SLD interaction.

#### 1.3.2 Factors influencing NH-SLD interaction

Developmental levels of NH and SLD children

It has already been noted that similarity of developmental level is associated with increased interaction, both between the NH and between NH children and classmates with various levels of learning difficulty. Sebba (1983) notes that similarity of developmental level was significant across the NH/SLD divide. These findings are consistent with the results concerning cross-age interaction, reviewed above. It is likely that NH-SLD interaction will be fostered when developmental, not chronological levels, are similar. The importance of developmental level of partner

highlights the confounding of results concerning interaction when results for children with different types of special need are grouped (for example, in Faught et al., 1983).

#### Abnormal classroom behaviours of SLD children

Another factor which may be associated with infrequent NH-SLD interaction is the abnormal classroom behaviours by SLD children. Beveridge and Evans (1978), Ispa and Metz (1978), Ross (1981) and Pieterse and Center (1984) have all reported odd classroom behaviours by children with SLD in integrated settings. These behaviours included distractability, disobedience, excitability and noisiness even when working alone. Abnormal classroom behaviours are an overt symbol of a difference between NH and SLD children. They are also evidence that SLD children are not conforming to classroom rules, a feature likely to be of particular importance to young children (Turziel, 1983). Both these factors may be seen as indicative of the different, and, hence, as shown in the cross-age studies, less-preferred, nature of SLD children compared with NH classmates.

It seems likely that abnormal classroom behaviours of SLD children will (as with NH-NH interaction, Cantrell and Prinz, 1985) be associated with unpopularity and lack of interaction with NH classmates.

This view is supported by Voeltz (1980) and Rose (1981). At a practical level misbehaviours of SLD children may lead to NH children having difficulties in communicating with those SLD children. This point is illustrated in Rose's (1981) study on tutoring of peers with SLD by NH nine and ten year olds: "For some tutors the strange behaviours exhibited by their charges made it extremely difficult to maintain a relationship" (page 21). However abnormal behaviours by SLD children do not in themselves account for isolation of those children as some of the studies which noted these abnormal behaviours found that children with SLD were well-accepted by NH classmates (Pieterse and Center, 1984). Thus abnormal classroom behaviours may be a contributory, but not the sole or inevitable cause, of NH children not interacting with SLD children in integrated classes.

#### Personalities of SLD children

A further factor in infrequent NH-SLD interactions in unstructured mainstream settings is the personalities of individual children with SLD. Many of the studies on integration have involved small numbers of children with SLD. If one or more of the children with SLD tends to be aggressive or very withdrawn then it is likely that the aggressive/ withdrawn child/children will participate in few interactions with NH children. Rejection by classmates may be a function of the handicapped child's

personality not his/her handicap. This point has been illustrated by Lynas (1986) who noted that personality was a significant variable in the successful integration of hearing-impaired pupils.

#### Personalities of NH children

Personalities of NH children will also influence the nature and frequency of NH-SLD interaction. Three to five year old NH children who received high sociometric peer ratings engaged significantly more often in organising play, sharing, and giving affection to SLD children than did children who received low sociometric ratings. This latter group engaged in significantly more negative initiations to SLD partners than did other NH children (Strain, 1983).

#### Sex of partners

Sex of partners is another factor influencing frequency of interaction. Young NH children have shown a preference for interacting with SLD children who are of the same sex as themselves (for example, Strain, 1984). This is consistent with the findings discussed earlier concerning cross-age interaction among NH children.

No significant differences have been found between young, NH girls and NH boys in their frequency of interactions with SLD classmates (Sebba, 1983). This is



consistent with the findings concerning helping behaviours.

#### Novelty of integration

Recently-created NH-SLD integration experiences are associated with infrequent NH-SLD interaction (Sebba, 1983). If integration of children with SLD is new for the mainstream school then both NH children and school personnel are likely to be more conscious of abnormal behaviours by children with SLD. Similarly those children will have had little opportunity to model normal classroom behaviours.

The need for "sanctioned staring" may account for the recurrent finding that experience of contact is significantly related to frequency of NH-SLD interaction when NH and SLD children are of similar developmental levels (Dunlop et al., 1980; Sebba, 1983; Schutz et al., 1984). A high initial frequency of staring at SLD classmates was noted by Ispa and Matz (1978). Donaldson (1980) suggests that "sanctioned staring" is a vital element in promoting positive attitudes towards the handicapped. If the NH spend part of the time staring at children with SLD this inevitably increases isolation of those children, at least in the short term. In the long run, short term isolation of SLD children, if arising from "sanctioned staring", may increase the likelihood of interaction.

### Proportions of NH and SLD children

The proportions of NH and SLD children may influence interaction. In many studies, as in most integrated classrooms, children with SLD are in a small minority. In Guralnick's (1980) and Sebba's (1983) work, numbers of children with special educational needs exceeded NH children. However it is not clear what effect different proportions of NH and SLD children have on interaction as Sebba's and Guralnick's work produced conflicting findings.

Much of the work reviewed above considers non-verbal interaction between the NH and classmates with SLD in unstructured classroom settings. A number of factors have been identified as influencing the frequency of NH-SLD interaction. The following section considers one variable, structure, which has been the focus of specific research attention.

#### 1.3.3 The influence of structure on NH-SLD interaction

Given the finding that "like attracts like" in many studies of NH-SLD interaction, one would anticipate that over time the developmental gap between NH and SLD children would widen, leading to increasing isolation of SLD children unless the developmental range of the NH

children in the class was initially wide and below that of the children with SLD. Studies such as that by Rose (1981) indicate that other factors can over-ride this tendency for a decrease in NH-SLD interaction over time.

Studies which have shown an increase in NH-SLD interaction have, as in the work by Rose (1981) and Voeltz and Brennan (1984) often introduced a particular type of structure to NH-SLD interactions (Strain and Shores, 1983; Brinker, 1985). In some senses all classrooms are structured, if only through the materials available, grouping of pupils and classroom conventions. However, beyond this intrinsic classroom structure various forms of structure have been imposed on integrated classrooms with the aim of promoting interaction between the NH and classmates with SLD.

The most usual type of structure imposed on NH-SLD interactions at primary school level has been "peer" tutoring in which the NH child is responsible for teaching a particular task to an SLD child (Rose, 1981; Kohl et al., 1984). Peer tutoring has been found to be fostered when tutor and tutee are of the same sex and there is a clear gap in competence between tutor and tutee (Allen, 1976; Hartup, 1978; Buralnick, 1978). These features are similar to those noted as promoting helping behaviours. In peer tutoring programmes such as that advocated by Kohl et al., (1984) the NH child is clearly the dominant partner/ tutor/ helper while the SLD partner is unequivocally the tutee/ helpee/

recipient. In this context there is a tendency towards dominance of the interaction by the NH partner (Siegal et al., 1985). This intensifies an inequality which has been illustrated in, for example, the tendency for the child with SLD to take the role of "baby" in children's home play in integrated settings (Strain, 1984) and for NH children to perceive those with SLD as needing a lot of help (Voeltz and Brennan, 1984).

Cooperative learning (Rynders et al, 1980) and buddy systems (Voeltz and Brennan, 1984) have arisen in part as a reaction to criticisms of peer tutoring in the NH-SLD context. Glynn (1985) illustrates the view taken by adversaries of peer tutoring in integration settings. He has argued that if there is a clear gap between the more and less skilled performer, reciprocity and mutual influence are minimised. As a result the interaction may be counter productive. The less skilled performer may be maintained in a state of "instructional dependence" (p.10). This danger is acknowledged by Voeltz and Brennan (1984) who have tried to base interactions around more equal roles of the NH and SLD partners. Voeltz and Brennan state this aim of equality explicitly, "The non-handicapped children are not viewed as tutors or helpers, and any connotation that the handicapped child is the "taker" and the non-handicapped child is the "giver" is avoided" (page 63).

There is an inherent conflict in these ideas as the features which promote helping behaviours are those

that increase dominance of the interaction by NH children. To remove these features may be to lead to greater isolation of the SLD children.

#### 1.3.4 The nature of NH-SLD interaction

The factors reviewed relate to the frequency of NH-SLD interaction but the above summaries suggest that this may constitute only a small part of the periods during which NH and SLD children are together, especially if the setting is unstructured. Strain (1983, 1984) has investigated the nature of NH-SLD interaction and compared three to five year old NH children's interactions with peers, and with SLD children. He found that the NH children directed more physical assistance, affection and resolving of conflicts to SLD partners than to peers. By comparison peers received more initiations of "reward related activity" (motor or verbal behaviour resulting in the peer's success), verbal compliments, reassurances, organising of play and sharing than did SLD children. These results show qualitative and quantitative differences in NH-SLD interaction compared with NH peer interaction and are consistent with the finding that cross-age and same-age interactions differ from one another.

#### 1.4 CONCLUSION

There are several common findings in the work on cross-age interactions and helping behaviours between NH children, and NH-SLD interaction. Both sets of work show a preference for same sex partners, more frequent interactions with partners of similar developmental levels and more frequent interactions in structured settings. Both cross-age NH dyadic interaction and NH-SLD interaction, especially in peer tutoring, tend to be dominated by the senior partner. Anastasiow (1984) notes that although such NH-SLD interactions "may hold some positive value for the handicapped child (and perhaps leadership qualities in the normal child), they are not the type of interactions that lead to friendship formation " (page 212).

Leadership is an ambiguous quality. It may entail the suppression of followers or the development of their skills. The research on cross-age dyadic interaction and studies of young children's NH-SLD interaction indicate that NH-SLD interaction between children of similar chronological ages is likely to be dominated by the NH partners. Interaction is fostered by structuring the interaction, for example through peer tutoring, but this form of structured interaction also intensifies

domination of the interaction by NH children. It is not clear what the quality of this dominance is, particularly in NH-SLD interaction in the early school years. One influence on the nature of this dominance is likely to be attitudes held by NH children towards classmates with SLD. Chapter 2 will examine research findings concerning young children's attitudes to peers with SLD in the context of experimental work on the development of young children's expressed attitudes and descriptions of other people.

## CHAPTER 2

YOUNG CHILDREN'S ATTITUDES TOWARDS, AND DESCRIPTORS OF,  
OTHER PEOPLE, INCLUDING PEERS WITH SLD

## 2.1 INTRODUCTION

Chapter 1 examined interaction between NH children in cross-age groups and, specifically, NH-SLD interaction. The inter-relationship of behaviour and attitudes has been discussed by Hartup et al. (1983) who concluded that children's interpretations of others' behaviours have direct implications for the behaviours that individuals subsequently elicit from one another:

Actors are guided by their own actions as well as by the impressions or expectations of others. Individuals tend to elicit behaviour that confirms their prejudices, implying that social cognition may be the cause as well as the consequence of social acts. (Page 106).



Therefore it is relevant, when exploring NH-SLD interaction to investigate attitudes held by NH children towards SLD children. Some broader issues concerning expressed attitudes towards other groups will be considered before discussing expressed attitudes of young NH children towards children with SLD.

## 2.2 CHILDREN'S EXPRESSED ATTITUDES TOWARDS OTHER PEOPLE

It seems likely that the development of attitudes towards children with SLD will follow a similar sequence to the development of attitudes towards other social groups; no known work has investigated this. Katz (1982), drawing on Piagetian ideas concerning children's processes of categorisation, has proposed a developmental sequence of eight stages in the acquisition of racial attitudes. Katz' proposed developmental sequence may be a useful way of comparing broad stages in attitude development towards various social groups. However, the reservations that have been expressed about stage theories of development (for example, Phillips and Kelly, 1975) suggest that there will be overlaps between stages and the distinction between one stage and the next may be unclear. The first seven stages in Katz' (1982) proposed sequence are relevant to the early years of schooling and will be

considered alongside research findings on children's attitudes to various social groups.

The first stage in the development of racial attitudes as outlined by Katz (1982) involves the observation of critical cues leading to the differentiation of others according to these defining properties. This is in turn associated with the development of more finely differentiated concepts about the self. Evidence suggests that by age three, children have the rudiments of awareness of cues concerning gender, race, age and kinship. This seems to be well established by age five (Gettys and Cann, 1981; Katz, 1982). This suggests that by age five, NH children will recognise that children with visible handicaps are different from themselves. Work on children's recognition of physical handicaps (Isa and Matz, 1978; Westervelt et al., 1983) supports this.

The second stage in the formation of racial attitudes concerns the development of early, unsophisticated concepts. This stage is complete by age three in many children and in virtually all children by age four (Katz, 1982). The extent to which these crude judgements are linked with evaluative judgements seems to vary according to the target group. Evaluative judgements have been found to occur earlier in relation to race (age 3, Proshansky, 1966) than in relation to gender (age five to six, Cann and Haight, 1983). By age five children have begun to develop negative attitudes

about the handicapped and to prefer non-handicapped to handicapped children (Cavallaro and Porter, 1980; Jenkinson, 1983).

The third stage in the development of racial attitudes proposed by Katz (1982) is that of conceptual differentiation. At this stage group boundaries are refined and the child is testing out whether or not individuals are members of specific groups.

In the fourth stage of racial attitude development the child is able to distinguish the irrevocability of certain cues (such as race and gender (generally)) and the transitory nature of others (for example age). Gender constancy has been found to be developed between ages four and seven (Slaby and Frey, 1975; Kohlberg and Ullian, 1977) and racial constancy by ages seven to eight (Kutner, 1958). Physical attributes seem to be very salient for young children, featuring prominently in descriptions of others, and as the basis for delimiting group membership (Livesley and Bromley, 1973; Rogers, 1978; Little, 1985). One would anticipate that children at this fourth stage of attitude development may be confused about whether or not handicaps are temporary (for example a manifestation of short term sickness) or permanent. Handicaps which have no overt physical symptoms (for example partial hearing or moderate learning difficulties) are likely to be more difficult for young children to understand and adjust to, than handicaps which have unambiguous, visual cues,

for example, physical handicaps or blindness.

This point is illustrated in a study of 7, 10 and 12 year olds' attitudes towards disordered behaviour. Maas et al. (1978) contrasted beliefs of younger with older children. Seven year olds were found to attribute disordered behaviour to innate characteristics, for example, the child's injury, disease or "born that way" whereas the older children believed that disordered behaviour could be changed by altering the external social environment.

In Katz' (1982) model, an understanding of the irrevocability of key cues is followed by consolidation of group concepts and the coordination of perceptual and cognitive cues. Young children have been found to confuse ability with effort, assuming that people who work hard are clever and vice versa (Durkin, 1986) and this may be a specific example of the failure to integrate conflicting sets of cues inferentially. Rogers (1978) concluded that it was not until the child was eight that he/she could accept that desirable and undesirable traits could coexist in the same person. This may be an important area in connection with young NH children's perceptions of children with SLD. For example, if children with SLD are perceived negatively as naughty, NH children may be unable to believe that those SLD children work hard.

The sixth stage in the development of attitudes towards others involves perceptual elaboration. At this

stage differences between groups may be exaggerated and within group differences diminished. This has been found to occur in pre-school children and to develop during the six to nine years period. At age six children have been found to have strong positive or negative feelings about racial groups (Milner, 1975; Davey, 1983). Similarly, Livesley and Bromley (1973) noted that seven year olds tended to describe others using single, univalent traits and differences between children were highlighted by describing certain children as "very, very, very....(e.g. naughty)". Increasing perceptual elaboration and associated attitudes are shown in the development of negative judgements towards facially deformed adults. These negative attitudes were not found, above chance levels, in five year olds but had begun to develop by age seven (Rumsey et al., 1986).

The seventh stage in the development of racial attitudes is termed "cognitive elaboration" by Katz (1982) and is defined as: "The process by which concept attitudes or preferences become (racial) attitudes" (page 48). This transition takes place during the early years of schooling; for example, the acquisition of stereotypes and notions about social status develop in the seven to nine years period in relation to race (Milner, 1983). Evidence concerning gender stereotypes is conflicting and there are indications that these do not develop in a linear way but peak at age six, then decline, and peak again at around age 12 (O'Keefe and

Hyde, 1983).

Research into attitudes held towards various groups of children with special needs has been referred to alongside Katz' (1982) stages. The development of attitudes towards children with special needs is broadly consistent with Katz' model. However focus will now turn to attitudes towards children with SLD specifically.

### 2.3 ATTITUDES HELD BY YOUNG NH CHILDREN TOWARDS CHILDREN WITH SEVERE LEARNING DIFFICULTIES

There is little reliable evidence concerning the nature of young children's attitudes to classmates with SLD. Although there have been many studies on the nature of attitudes towards the handicapped in general, these findings do not necessarily apply to attitudes towards SLD children. The reasons for this will be explored when methodological issues are discussed (2.3.3).

If attitudes towards children with SLD parallel attitudes towards racial groups, the focus of Katz' (1982) model, then by ages six to seven, NH children are likely to have worked out which cues concerning SLD are irrevocable, i.e. that SLD, indicated by, for example, low attainments on school tasks, are permanent; and to increasingly identify SLD children as being similar to one another but different from NH children. Katz (1982) has stated that children's school experiences are

particularly important in the "cognitive elaboration" of attitudes and that: "Continuing research focus on the pre-school years may well have obscured the importance of the early grade school years [six to eight] as focal points in attitude transition" (page 48).

Attitudes towards children with SLD are examined here under two separate headings: affective attitudes and knowledge of SLD. This reflects writing on attitude theory which has distinguished between affective, cognitive and behavioural components of attitudes (Eiser, 1980). The latter component was considered in Chapter 1 under NH-SLD interaction.

### 2.3.1 Affective attitudes towards SLD classmates

Children with SLD are less well-received than NH children, by NH classmates (Jenkinson, 1983). This supports the wider view that the least able children in classes are also the least popular (Nash, 1973; Spence, 1987) and of relatively low status (Gottlieb and Levyer, 1981). SLD children, compared with children with other handicaps, are less popular (Pieterse and Center, 1984) and described more negatively (Voeltz and Brennan, 1984). This does not necessarily imply that SLD children are disliked by classmates. These findings parallel work on NH-SLD interaction which found that NH children tended to interact more with NH classmates than with SLD children (Chapter 1). However, as Asher and Taylor (1981) note, failure to accept

and rejection (of handicapped children by the NH) are only moderately correlated and are associated with different types of behaviour. A failure to accept a handicapped classmate is not synonymous with rejecting that child. Children with SLD may be well-liked by NH children but still be less popular than NH classmates or children with other types of handicap.

The complexity of attitudes towards SLD children is illustrated by Gottlieb and Switzky (1982) who examined attitudes of 8-11 year olds towards 'mentally retarded' people. Gottlieb and Switzky identified four separate attitude factors: general positive evaluation, general negative evaluation, likeability and perceived unhappiness. It is likely that an assessment of these four factors would differentiate between a lack of acceptance, and rejection, of SLD children by NH classmates.

#### Factors influencing affective attitudes towards SLD classmates

Factors influencing the development of positive affective attitudes towards SLD children can be sub-divided into personal factors related to individual NH/SLD children and contextual factors. There are many parallels here with factors identified in Chapter 1 as influencing NH-SLD interaction.



#### Competence of SLD children.

Several researchers (for example, Jenkinson, 1983) have found a strong negative correlation between competence of SLD children and their acceptance by NH classmates; that is, the least able SLD children were most liked by NH classmates. Budoff and Siperstein (1978) endorse this point: "Children may be more tolerant and accepting of behaviour from a peer who is not expected to perform well, than from a child for whom there is no obvious explanation for poor performance" (page 478). The relationship between popularity and competence may be curvilinear, with children who markedly lack ability being more popular than classmates with mild learning difficulties, but those children being less popular than more able classmates.

This may explain the conflicting findings between researchers investigating affective attitudes to SLD children and conclusions reached by reviewers of research on attitudes towards the handicapped (Horne, 1985; Slavin and Madden, 1986). These reviewers suggest that in general handicapped children are not well accepted by NH classmates. Such overviews may be reflecting a lack of popularity of the largest "handicapped" groups, that is, children with mild or moderate learning difficulties.

#### Experience of contact with SLD children

Experience of contact with SLD children has been associated with an increase in positive attitudes. This effect was stronger for eight year olds than for 10 and 12 year old NH children (Iowfisquey-Mooshyar and Zingle, 1984). Gottlieb and Switzky (1982), while not relating assessed attitudes to experience of contact, found an age effect in attitudes towards 'mentally retarded' people. In their study 11 year olds were more positive than eight year olds in terms of a decreased general negative evaluation, an increase in likeability, and a decrease in perceived unhappiness, of 'mentally retarded' people. The dimensions of attitudes "shifted differentially as children grew older" (p.599). Both these studies used cross-sectional designs and require longitudinal studies to test the findings concerning experience/age-related effects. Such work would separate age from experience effects and hence show how findings may generalise to younger children with/without experience of SLD children.

#### Structure of NH-SLD contact

The development of positive attitudes is associated with pairs of NH and SLD children working on a cooperative common task (Voeltz, 1982; Johnson et al., 1983; Madden and Slavin, 1983; Fenrick and Petersen, 1984; McConkey and McCormack, 1984; Zakay, 1985; Slavin, 1986). All these

studies have concerned NH children of upper junior or secondary school age and it is not clear whether or not the effects of structure on affective attitudes will be the same with younger NH children. Katz' (1982) statement concerning the importance of the early school years in attitude development suggests that this question warrants testing. An important factor in the promotion of positive affective attitudes, in the studies cited, is equality of status between the NH and SLD partners. The importance of structure, and specifically working on a common task, was also noted in Chapter 1 as promoting NH-SLD interaction.

#### Sex of NH child

NH girls of age 10 or older, have been found to be more accepting, than NH male peers, of SLD children (Stainback and Stainback, 1982) and handicapped people in general (Voeltz, 1980; Hazzard, 1983). No studies of affective attitudes of younger children towards SLD classmates are known but no statistically significant sex differences were found in frequency of NH-SLD interaction (Sebba, 1983).

#### 2.3.2 Knowledge of SLD

Hazzard (1983) found that affective attitudes and knowledge of handicap were two different dimensions which needed to be separately assessed in studies concerning integration. No known studies have explicitly investigated NH

children's knowledge of SLD. Stainback and Stainback (1982) did not measure knowledge of SLD but included assessment (positive or negative) of various traits including "healthy" and "sickly" applied to SLD peers. 52.5% of 11 year old NH children thought of SLD children as "healthy" and 22.5% thought SLD children were "sickly". Strain (1984) reviewing several studies concerning secondary-aged NH children's attitudes towards schoolmates with SLD notes that the NH children believed the children with SLD to be younger than their years.

### 2.3.3 Methodological issues in the assessment of attitudes towards children with SLD

Several researchers have combined questions relating to different handicapped groups in single assessments of attitudes (for example, Voeltz, 1980). It seems likely that attitudes towards, for example, blind children, will differ from attitudes towards emotionally disturbed children but grouped results preclude the identification of attitudes towards specific handicapped groups. This is particularly important if young NH children are the focus of the research. Both the work on descriptors of other people and Katz' developmental model of attitude development suggest that overt, physical characteristics are very salient for young children. Consequently young children's attitudes towards the handicapped may vary according to visibility of the handicap.

Lack of homogeneity within handicapped groups may also

account for the lack of consistent findings concerning attitudes towards the handicapped. For example, children with SLD may encompass a diverse group due to: (i) different causes of SLD (for example, chromosome disorders, neurological dysfunction, or unknown causes), (ii) the likelihood of SLD children having secondary handicaps (for example, visual or hearing difficulties), and (iii) marked personality differences between SLD children.

Similarly the NH group of respondents may be heterogeneous. In small scale studies (for example Esposito and Peach, 1983) results may be distorted through the composition of the NH group whose attitudes are assessed. For example, children with mild learning difficulties may differ markedly from able children in attitudes towards SLD classmates.

Another cause of conflicting findings concerning attitudes towards the handicapped and SLD children specifically is the use of different assessment measures of attitude, for example, sociometric devices, questionnaires, semantic differential techniques or interviews with varying degrees of structure. The use of the first of these is reviewed by Asher and Taylor (1981) who comment on the failure of some sociometric approaches to distinguish between the neglect, compared with the rejection, of handicapped children by NH playmates and classmates. Results between studies concerning the popularity of SLD children are not comparable if one study asks only for nominations of positive choices (e.g. best friends) and hence treats all non-chosen

subjects as similarly rejected while another study asks for nominations of both best friends and least preferred children.

Different assessment techniques may also generate widely differing results because some approaches (for example, questionnaire items) may be measuring knowledge about the handicapped rather than affective, cognitive or behavioural dimensions of attitudes.

The type of assessment measure used has implications for the size of sample and therefore another potential source of bias. Questionnaire measures have tended to be used to provide a broad picture across a large number of subjects and are therefore more likely to be generalisable than are results from structured interviews used to provide relatively fine-grained data on small samples.

A further difficulty in comparing results concerning attitudes towards SLD children is the differences in terminology across time and cultures to describe this group of children. Differences in terminology to refer to the type of children currently identified in Britain as having SLD, include: Trainable Mentally Retarded (U.S.) and developmentally delayed (Australia). The latter two categories overlap, but are not synonymous with, "SLD". It is not clear whether or not the same type of children are being considered each time.

## 2.4 CONCLUSION

There are conflicting findings concerning attitudes of NH children to handicapped peers. Some researchers have argued that the handicapped are well-accepted by classmates but other workers have found the reverse. Several factors, including methodological issues, have been suggested as responsible for these conflicting findings.

The nature of attitudes of young children towards peers with SLD is an important aspect of integration given that those attitudes may elicit behaviour which reinforces those beliefs. For example, if NH children believe (as Strain, 1984 noted) that children with SLD are younger than their years and interact with them accordingly, this may explain the dominance of NH-SLD interaction, in cross-developmental age pairs, discussed in Chapter 1. Examination of the quality of NH-SLD interaction is needed to clarify the relationship between attitudes and behaviour. One way to examine the quality of NH-SLD interaction is through analyses of the language used in NH-SLD dyads. This is the focus of the following chapter.

## CHAPTER 3

## DISCOURSE IN CROSS-AGE DYADS INVOLVING YOUNG CHILDREN.

## 3.1 INTRODUCTION

In Chapter 1 developmental research into children's cross-age interactions was found to have parallels in NH-SLD interaction. There may be similar parallels between discourse in cross-age dyads and discourse between NH and SLD children, specifically speech by young NH children to SLD partners may resemble speech by young NH children to younger NH children (for example, siblings or tutees).

## 3.2 THE COMMUNICATIVE COMPETENCE OF YOUNG CHILDREN

A recurrent theme in recent work concerning children's language development (Romaine, 1984; Ervin-Tripp and Gordon, 1986; Wood, 1988) is the



importance of the early school years as the period during which the child "acquires the competence as to when to speak, when not, and as to what to talk about with whom, when, where and in what manner" (Hymes, 1974; cited in Romaine, 1984, p. 2). Karmiloff-Smith (1986) describes five years as a "frontier age" in which the child begins to move from "within-sentence" to "discourse domains" of language performance. She suggests that age eight marks another transition in language use when the child begins to cope abstractly with language.

This may make NH-SLD verbal interaction in the early school years a particularly important base for developing communicative competence. Children with SLD are likely to confront young NH speakers with particularly difficult problems because, at a "sensitive period" (for the NH children) the SLD children will not behave as "normal" linguistic partners. This issue will be considered further in Chapter 7.

### 3.2.1 Young children's abilities to adjust talk to listeners

The extent to which young children are able to sustain discourse, particularly with children older or younger than themselves, has been the subject of debate, stimulated by the work of Mueller (1972), Garvey and Hogan (1973), and Shatz and Gelman (1973). This debate

reflects wider issues concerning the extent to which young children are able to take the view of another (for example, Donaldson, 1978). Work on helping behaviours in young children, summarised in Chapter 1, indicates that children as young as four years old are able to socially decentre. In a review of discourse Ervin-Tripp and Gordon (1986) concluded similarly that awareness of the partner's point of view appears after four years of age. Without this ability to decentre young children's discourse is necessarily limited and the "reciprocity of perspectives" referred to by Widdowson (1984) (and essential for dialogue as opposed to two concurrent monologues) is not possible.

A variety of research on the development of children's language has examined whether, and how, children adjust their language to the perceived linguistic needs of the listener. Adjustment to the listener encompasses listener variables relating to age, ability, sex, familiarity, handicap, rights, possessions and status; as well as adjustments related to the listener's role, for example as a tutee. Work in the field (reviewed by Garvey, 1984; McTear, 1985; Cox, 1986; Ervin-Tripp and Gordon, 1986) suggests that children as young as four years old are sensitive to the linguistic needs of the listener. Features associated with speech by three, four and five year olds towards younger, compared with adults and older, children include use of devices which may be linked to securing

and maintaining the listener's attention, for example, shorter utterances, more attention-getting devices particularly more names and endearments, more repetitions of utterances and the use of a higher pitch; and utterances which were relatively simple for the listener to process, for example, fewer complex instructions, more imperatives and fewer questions (Shatz and Gelman, 1973; Dunn and Kendrick, 1982).

Listener variables to which speech is adjusted

Much of the work on young children's responsiveness to listener cues confounds cues relating to age, ability, status and familiarity. In several of the studies cited it is not clear whether modification to the listener's presumed skills reflects an adjustment to listener age, listener ability (probably a more complex adjustment) or listener status. Talk to younger siblings for example, might involve recognition and adjustment to all three of these cues. It has tended to be assumed that, in these studies, it is age of listener to which speech is adjusted.

Status of listener- use of politeness markers

It has been suggested that young children do adjust their speech specifically to the status of the listener. One illustration of this is the use of more

and less linguistically polite terms. It has been found that children as young as two years old discriminate among forms of address depending on the status of the addressee and that four and five year olds include more politeness markers when addressing adults or peers than when addressing younger children (Terrell, 1985). Mitchell-Kernan and Kernan (1977) found that addressees lower in rank than the speaker received over five times as many directives as listeners of higher rank. Use of politeness has also been linked with degree of interruption by listener and difficulty of task. Children age five to eight years used more politeness markers and fewer imperatives if the listener tended to interrupt or if the task was difficult. Conversely fewer politeness markers were found when the listener was already cooperating on a task or if the task was easy for the children (Ervin-Tripp and Gordon, 1986). One might predict from this, that on all three grounds of status, task difficulty and possibly partner cooperation, young NH children tutoring SLD partners would be likely to omit politeness markers.

Spinelli and Ripich (1985) suggest that as children become aware of adult conventions children increase the use of politeness markers. Spinelli and Ripich found a change between NH six and eight year olds in the type of speech addressed to hearing impaired peers. Six year olds tended to reformulate requests to more direct forms whereas older children revised

requests to more polite forms. However it may be that the eight year old hearing impaired children tended to interrupt more than did the six year olds; it was the level of interruption which prompted use of politeness markers.

#### Dominance or submissiveness of listener

Discourse features of dominant and submissive children in same-age dyads have been studied. The dominance/submissive cues seem to be a combination of status and personalities of participants. Ervin-Tripp and Gordon (1986) summarise research investigating language interaction in dyads of nursery school children. When age was controlled the dominant partner gave more directives and used more imperatives than the subordinate partner.

Classrooms in which a minority of children speak English as their second language also contain a linguistically dominant group. Brown (1979) monitored the school language of five year olds towards two children in the class for whom English was their second language. She found that the native speakers' language to the minority group children contained a high repetition of words and phrases, emphasis of rhythm and regularity of speech patterns, a high proportion of dominating and critical remarks, and a low proportion of explanatory, out-going, and approving remarks. In this

context dominant-submissive language patterns may be inseparable from language forms arising from racial attitudes. However, although Brown does not provide the fine-grained detail of language which is given by Ervin-Tripp and Gordon (1986) there do appear to be similarities in the types of language used by the linguistically dominant partners in different contexts.

#### Sensory impairments of the listener

A growing body of work has considered the ways in which young hearing children address peers with deafness or hearing impairments. Adjustments to these difficulties would, one might anticipate, be fairly gross compared with the minor adjustments which might be required to adapt to cues concerning age, ability or status. Various studies (for example, Arnold and Tremblay, 1979; Vandell and George, 1981; Wood et al. 1986) suggest that, perhaps surprisingly in view of research findings summarised above, young NH pre-school children were not good at adjusting to the needs of deaf/hearing impaired peers. Vandell and George (ibid.) conclude, "To the contrary they (young NH children) continued to use simple vocalisations which were effective with hearing but not deaf partners" (p.634).

These findings contrast with those in a study by Maratsos (1973) who found that pre-school children produced more explicit referents to adult listeners who

covered their eyes, than to sighted listeners. However two important differences between Maratsos' study and those on hearing impaired children may account for the different findings. Firstly, the listeners in Maratsos' study were adults not peers and therefore, the pre-school speakers may have appreciated that the situation was artificial, or a game, in which the crucial difference with normality was the adult's lack of vision. Donaldson (1978) has shown the ways in which children's abilities are misjudged because the child "plays the adult's game". This game situation may not be generalisable to natural peer-peer interaction. A second key feature of the Maratsos study was the covering of the eyes; an explicit visual cue to the limitation of the listener. Hearing impaired children may not have such clear visual cues to their handicap. Even the wearing of a "phonic ear" may not be interpreted by young children as indicative of hearing impairment.

The importance of these differences is supported by Light's (1987) argument that it is the perceived need to take account of the listener's view which is crucial in adjusting talk to the listener and not differences in capabilities to do this. Continuing this argument, it is probable that whereas the children in Maratsos' (1973) study were made aware of the need to adjust talk to the listener, this may not have been the case for Vandell and George's (1981) subjects.

#### Ability of the listener

The extent to which young children respond to ability of the listener, that is listener ability rather than listener age or listener role/status is the key cue, is not clear. If children respond to cues about ability of the listener then this should be evident in two types of study. Firstly, studies of discourse involving speech to children of similar age but varying ability levels and secondly, speech to children of widely differing ages but of similar ability levels. In the first of these it is still likely that ability cues would be confounded by status cues as peer status in schools has been shown to be linked with perceived ability (Little, 1985; Spence, 1987).

There are conflicting findings concerning the extent to which the same child acting as tutor to different tutees behaves in a consistent way linguistically. An interesting study by Masur (1978) suggests that child tutors are able to discriminate between same age tutees of varying expressive language abilities. In Masur's study 10 four year old boys, tutoring high and low verbal two year old boys, adjusted their language appropriately and monitored it during the teaching session. The four year olds produced longer, and more syntactically complex, utterances to the more responsive listeners. However not all features varied across partner type; the percentage use of attentionals



did not differ across the high verbal and low verbal listener groups. This indicates that although there were variations in speech between listener types, this may apply to only certain discourse features. The published report of the study does not indicate whether or not different use of attentionals would have been appropriate for high, compared with low verbal listeners.

No references have been found to specific studies of discourse involving consistent ability of listeners across different ages. It seems likely, from the consistency concerning results of analyses of talk to younger children (summarised above), that perceived listener age/status may be a more powerful cue than listener ability.

#### Listener role as tutor

Specific roles with markedly different statuses are those of tutor and pupil. Garvey (1984) has reviewed work on (i) three and four year olds playing "schools" and (ii) how older children tutor younger children. This work shows that even young children have well-developed ideas about the linguistic conventions of the tutor role. Garvey concludes that:

By the age of seven some children do display an understanding of the

reciprocal responsibilities of the teacher and pupil roles. They know that the teacher must obtain the attention of a distracted and unwilling pupil, should confirm or otherwise indicate acceptance of a pupil's correct response, and correct an incorrect response or try again to elicit a correct one. (Page 181).

Research which has involved young children tutoring peers or younger children (Cooper et al., 1980; 1982; Lloyd, 1982) supports the above findings. When compared with an adult tutor, six and seven year old tutors use: more direct elicitations, fewer hints, fewer indirect elicitations, fewer questions to elicit correct responses, and less explicit verbal feedback. Child tutors also tend to model the correct response (timing, content and pitch) and acknowledge the pupil's correct responses with repetitions. Several of these characteristics, for example, repetitions and direct elicitations, were also noted in the speech of young children to younger children. These studies have also shown that in the tutoring situation children of around five years old tend to use a step-by-step instructional strategy while seven and eight year olds supplement this with an opening monologue to orientate their pupils procedurally and substantively.

Understanding of subtle variations in the tutoring

role are illustrated by McTear (1985). He found that, when playing a tutor role, eight year olds varied their talk according to the curricular area of the "lesson". Similarly Cazden et al. (1979) observed that eight and nine year olds varied their style of talk as they switched between "teacher" roles in a game and normal peer interaction. Both these studies show an adjustment which is closely tied to an understanding of social roles and is, secondarily, an adjustment to the specific listener.

The effectiveness of children's tutoring strategies has been considered by Tattershall and Creaghead (1985). They concluded, in a review of peer tutoring studies, that eight to nine year old child tutors were poor tutors of six to seven year old tutees. The child tutors either showed what to do but gave little explanation, or asked "guessing game" questions, both of which forced the learner to perform the task with little help. In contrast, adults tended to orient, explain, and in various ways to prepare the child for the task. Adult tutors also, in contrast to child tutors, diminished control during the teaching task. This work, reflecting Wood et al.'s (1976) notion of "scaffolding", goes beyond questions about sensitivity to the listener. Presumably cues from the child tutee might not indicate to a child tutor that an explanation, as well as demonstration of the task, was needed. Effective teaching strategies require an understanding

of the learning process itself.

#### Tutoring in cooperative and didactic contexts

It was noted in Chapter 1 that NH-SLD interaction tends to be dominated by the NH partner(s). Therefore it is relevant to examine tutoring in contexts in which one child is dominant. Cooper et al. (1980, 1982) have investigated types of discourse in cooperative and didactic peer tutoring among same-age pairs of six and nine year olds. Cooper et al. found distinctive communication patterns in the two conditions. Cooperative dyadic interaction was characterised by a high use of monitoring and little evaluation of the partner. Conversely didactic dyadic interaction featured high levels of directing, questioning and non-verbal prompts. Cooper et al. note that directives were given less frequently, but were more effective, in the cooperative than in the didactic condition. They suggest that this was the case because in that context both partners could, and did, issue directives. The characteristics of effective child tutors posited by Cooper et al. have been supplemented in work by Wilkinson (1984). Wilkinson found that effective six to seven year old speakers to peers expressed themselves clearly, stayed on task, were sincere, and persisted by revising their requests to other children.

The work described above suggests that young children (age four years plus) are able to adjust their language to the perceived needs of the listener and that they understand the linguistic conventions of the tutor-tutee situation. Light (1987) has suggested that it is not the ability to adjust talk to the listener, but the recognition of the need to do this, which is crucial. This hypothesis is supported, for children age six plus, by a study of five, six and eight year olds' route descriptions to younger children (Waller and Harris, 1988). Waller and Harris found that six year olds (but not five year olds) could produce appropriate instructions for the listener when the need to do this was pointed out although they did not do this spontaneously.

### 3.2.2 Speaker response to a failed message

It is not clear how children develop abilities to adjust talk to the listener, or what they do when a message appears not to be understood. Robinson and Whittaker (1986) and Terrell (1985) have reviewed research which has examined these points. They have considered particularly changes which take place during the important period, for developing communicative competence, of the early school years.

Failed messages occur in talk between young children and the frequency of failed messages depends,

in part, on the nature of the joint focus. Mueller (1972) classified 15% of utterances in speech in dyads of three and a half to five year olds as "failures". Lloyd (1982) working with four to five year olds found an overall failure rate of communication in 19% of utterances on a relatively simple task but this increased to 42% when pairs of children worked on a more difficult variation task. This suggests that young children receive no response to an attempt at communication moderately often. Response to failed messages is an important area if one is trying to draw inferences about discourse between NH and SLD peers as it is probable that much speech by NH children to SLD peers will meet with little clear, verbal response.

Given that young children in conversation with peers do experience failure of communication, do they recognise this failure and understand how to remedy it? Terrell (1985) in a review of relevant research found that children did not evaluate the listener's comprehension accurately until age six to seven. Similarly it has been found that five year olds, unlike seven year olds, assumed that as long as the verbal message was consistent with the intended meaning, then the message was adequate. The younger children did not appreciate that to guarantee successful communication the speaker must "identify the intended referent uniquely from the listener's point of view" (Robinson and Whittaker, 1986; page 159). Similarly Robinson and

Robinson (1977) found that in cases of communication failure in which the responsibility could be traced to the speaker's inadequate message, children of around five years blamed the listener. It seemed not to occur to the child that the speaker or the message was at fault. This work suggests that young NH children may be inefficient in evaluating whether or not SLD partners have understood a message and that if SLD children do not respond to a message from a NH child then the NH child will be likely to blame the SLD child for this failed communication.

The reaction of the listener when a message is not communicated, will influence the speaker's linguistic behaviour; the speaker may give up, assume wrongly that the message has been understood or reformulate the message. Lloyd (1982) and Merritt (1982) found that young children do repeat or reformulate utterances if they realise that the listener's response is inappropriate. This suggests that if NH children become sensitive to SLD partners' failure to understand there will be an increase in repeating and/or reformulating utterances.

Speaker reaction to explicit information that  
a message has not been understood.

Tattershall and Creaghead (1985), Ervin-Tripp and Gordon (1986) and Robinson and Whittaker (1986) report ways in which children respond if they are told explicitly that a message has not been understood. If children of five to seven years old were told explicitly during the exchange that the listener (experimenter) needed more information (e.g. "I don't know which one you mean") or if the listener refused to interpret the child's ambiguous message without telling the child why (e.g. "I can't choose yet") then there were clear advances in both the children's judgements about ambiguous messages and their speaking performances. However if the experimenter guessed what the child meant then advances were not made. One may hypothesise from this that, in an integrated setting, if the child with SLD (a) waits for clarification or (b) responds to the NH child in a way that makes it clear to the NH speaker that more information is required, then the NH speaker will be likely to provide clearer, less ambiguous instructions.

The early years of schooling are an important period for the development of children's discourse. However talk in classrooms at this period is heavily teacher dominated (Wiles, 1983) and children may not be receiving the opportunities for talk with peers which



would enhance communicative effectiveness. Robinson and Whittaker (1986) found few examples of talk in school in which young children were told explicitly that the listener had not understood. They found no examples in which children were told by the listener why he/she had not understood the message. These are the features which their research had suggested as particularly crucial in developing communicative competence. They are also features which may be evident in integrated classrooms, that is if an SLD child does not understand the NH child's utterance the SLD child may either verbally or non-verbally make this very clear (running away, doing the "wrong" thing etc.). If adults are present they are likely to explicitly point out to the NH speaker that his/her message has not been understood by the SLD child.

#### Developmental trends in the use and types of reformulations

Young children tend to repeat, rather than to reformulate, utterances and a preference for particular repair or reformulation strategies develops in the early school years. Six year olds became more intense when reformulating requests to puppets whereas eight year olds became more persuasive invoking obligations, justifications and bribery (Ervin-Tripp and Gordon, 1986). Seven and eight year olds tend to recode messages

using more elaboration than reduction of constituents (Terrell, 1985).

It is not clear how far these findings are generalisable to NH children's speech to SLD partners because the features reviewed here, (decreased repetitions, greater elaboration) which increase between ages six and eight, are the reverse of features noted as typifying speech to younger children. The demands of adjusting speech to the listener may take precedence over the utilisation of more complex skills when the latter are just beginning to be acquired.

There may be parallels between young children's speech to younger children and NH children's speech to SLD children. It was noted in Chapter 2 that NH children have been found to think of children with SLD as younger than their years. If a NH child speaker thinks that a peer with SLD is developmentally younger than him/herself, one would expect to find in speech by NH children to SLD partners, features typical of NH children's speech to younger children. One would also anticipate that the NH children would tend to provide few indirect elicitations but would repeat speech of the child with SLD and model the correct response. Children of around five years old would be likely to use a step by step instructional method whereas slightly older children would provide more information about the task

in an opening monologue.

Some of these features have been identified in the limited amount of published research into speech by NH children to peers with SLD. This work will be examined in detail with reference to possible parallels with the work reviewed here on young children's adjustments in speech to the needs of the listener and the development of communicative competence.

### 3.3 DISCOURSE IN DYADS INVOLVING YOUNG NON-HANDICAPPED CHILDREN AND PEERS WITH SEVERE LEARNING DIFFICULTIES

Verbal interaction between children is an important aspect of classroom learning and has been given increasing recognition (for example, Edwards and Westgate, 1987; Mayor and Pugh, 1987; MacLure et al., 1988). Discourse between young NH pupils and children with special needs, particularly SLD, is an interesting area because features associated with the development of communicative competence, such as the listener's explicit failure to understand, may be prominent in NH-SLD discourse.

Three reports of four studies, three of which were in laboratory settings (Guralnick and Paul-Brown, 1977; 1980; 1984) provide evidence about the nature of NH-SLD child discourse. Guralnick and Paul-Brown monitored language used in four types of same-age dyad involving four and five year olds. NH children were paired with four types of partner: (i) other NH children, (ii) children with mild learning difficulties, (iii) children with moderate learning difficulties and (iv) children with severe learning difficulties (SLD). NH children were paired with children from the four groups in random order. Numbers involved were small, four (1977 studies)

or eight (1980 and 1984 studies) focal NH children and four children from each of the LD and partner NH groups.

Data was collected during 15 minute instructional sessions in an experimental setting (1977, experiment 1; 1980, 1984 studies) and in free play (1977, experiment 2). The instructional sessions involved a structured task taught to the partner by the focal NH child. In these tasks the NH tutors were given detailed instructions from the experimenter(s) about how the task was to be taught.

The results (Guralnick and Paul-Brown, 1977; 1980) showed a pattern of broadly similar types of talk to NH partners and children with mild learning difficulties, contrasted with talk to children with moderate or severe learning difficulties. Guralnick and Paul-Brown (1977) concluded that, in both structured and free play settings: "Speech tended to be more complex, more frequent, and more diverse when addressed to developmentally more advanced children" (page 259). The strongest findings concerned productivity of speech (e.g. MLU (in words)). This pattern of results is consistent with the findings from research, reviewed earlier, into talk by young children to younger or less able partners; the younger children (chronologically or developmentally) received shorter utterances, less complex utterances, fewer utterances and more requests and repetitions.

Guralnick and Paul-Brown (1977, 1980) found only

one discourse feature (repeated behaviour requests) which varied consistently and significantly with the four increasing developmental levels of partners. This may indicate that measures used were too crude to reveal finer adjustments to partner, that only approximate adjustments to partner were made, and/ or that the developmental levels of partners were not consistent with the educational label assigned to them.

Guralnick and Paul-Brown's third report (1984) explored the first of these possibilities. This report examined failed request sequences and the successive communicative adjustments made by NH speakers to the four types of partners given above. Seventeen aspects of communication by the target NH children towards each of the four partner types were measured. In general, the most frequently used strategies for following a behavioural request which met with no response were: repeating the utterance, adding relevant information, providing demonstration or exemplification, and using physical guidance.

Guralnick and Paul-Brown (1984) report significant differences across partner type for four measures (MLU, reformulating an utterance by asking a question, reformulating an utterance by demonstrating and exemplifying, and reformulating an utterance by justifying/ mitigating). In three of the four significant results, differences were accounted for by NH partners being addressed differently from the three

learning difficulty partner types but there were no significant differences across the latter. MLU, as in the earlier studies, was significantly shorter with moderate and severe learning difficulty partners than with mild learning difficulty or NH partners.

Speech to SLD partners was found to contain significantly fewer single (for example, repetition only) and more "multiple" communicative adjustments (for example, adding an attentional and repeating the utterance and demonstrating action) than did failed behaviour request sequences to other partner types.

The other 13 aspects of focal NH children's communication to partners (including: clarity of utterance, physical guidance, repeating an utterance, using attentionals and reformulating an utterance by confirming/ negating) did not differ significantly across partner types. Although differences were not statistically significant, NH children were less successful in effectively communicating with SLD partners than with the other partner types. Compliance with SLD partners was achieved in 28.0% of NH-SLD failed behaviour request episodes (figures for other groups not given).

The small samples involved may partly account for the lack of statistical significance. The total number of failed behavioural request sequences was 158 (47 in NH-SLD dyads, 55 in NH-moderate learning difficulty dyads, 27 in NH-mild learning difficulty pairs and 29

for NH-NH partners. Thus the children with moderate learning difficulties received most failed request sequences. Guralnick and Paul-Brown do not explore this and numbers are small, but it may be the case that the NH children were made more aware of failed messages to this group than to the others and so took (unsuccessful) action to remedy this. Limited linguistic skills of the SLD children may have meant that they were unable to communicate failure to understand to NH partners.

Guralnick and Paul-Brown (1984) claim that this study supports their earlier findings that: "NH children are capable of appropriately adjusting their communicative interactions as a function of the developmental level of the listener" (page 916). However the lack of statistically significant results for the majority of the discourse features, indicates that while children may have been capable of making such adjustments they often did not do so. The research shows an apparent lack of differentiation in talk across partner types, particularly between different groups of children with learning difficulties. The results indicate that the follow-up to a failed behavioural request, varied little whether the partner had mild, moderate or severe learning difficulties.



### 3.4 CONCLUSION

The results reported by Guralnick and Paul-Brown (1977, 1980, 1984) show broad trends that are consistent with the findings of Masur (1978) and indicate that talk directed to partners of widely differing levels (for example, NH compared with SLD) did differ in ways that were broadly appropriate for the listener. However the results do not support claims that children are able to make fine-grained adjustments in talk to partners. The age of the NH children (i.e. four and five years) in Guralnick and Paul-Brown's work may have been a crucial factor in their inability to make fine-grained adjustments to listeners with varying degrees of learning difficulty. Research findings concerning communicative competence suggest that the NH children would probably have been at the early stages of developing discourse skills.

The development of communicative competence during the early school years suggests that slightly older children than those in Guralnick and Paul-Brown's work may be able to make fine-grained adjustments in talk to partners. Guralnick and Paul Brown's (1977, experiment 1; 1980; 1984) work also focused on talk in highly structured settings using data collected in brief (15 minute) sessions. Data collection over a longer time period may show progressive adjustments to partner as the speaker makes deductions about appropriate types of

talk.

These issues are explored in Study 3 which formed the last of a triad of studies investigating NH-SLD interaction. The inter-relatedness of non-verbal interaction, attitudes and discourse led to the setting up of three studies to investigate each of these aspects of NH-SLD interaction. These studies are reported in the following four chapters, the first of which introduces the group of studies.

## CHAPTER 4

### INTRODUCTION TO THE STUDIES

#### 4.1 INTRODUCTION

This research set out to investigate non-verbal interaction between, attitudes towards, and discourse between, non-handicapped (NH) six and seven year olds and peers with severe learning difficulties (SLD) in the context of educational integration. The studies differ from published works by other researchers in several major ways; firstly in the focus on the above three aspects of NH-SLD interaction, secondly in the emphasis on NH children in the early school years and thirdly in the use of a relatively large number of NH-SLD dyads.

#### 4.2 THE THREE STUDIES

The research comprised three separate but related studies. Study 1 encompassed quantitative assessments of non-verbal and verbal NH-SLD interaction in ten dyads over one school year (September 1984-July 1985). It

enabled the feasibility of focusing specifically on verbal communications in NH-SLD dyads to be assessed. The importance of the latter, and a review of the few published reports on the topic, have been discussed in Chapter 3. Study 1 also provided a crude measure of attitudes held by NH children towards children with SLD. More fine-grained analyses of attitudes, distinguishing between affective attitudes and knowledge of SLD, were made in Study 2 (September-October 1985, June 1986). The importance of this distinction between affective and behavioural components of attitudes has been shown in a number of published studies, noted earlier (Chapter 2). Attitudes, measured at the beginning and end of a year of integration sessions, were seen as an influence on interaction, specifically discourse. Study 3 (September 1985- July 1986), focusing on NH partners, examined various aspects of NH-SLD discourse, including the inter-relationship between attitudes and discourse.

#### 4.2.1 The schools involved

The mainstream school from which the NH children involved in the two year project came, was located in a semi-rural area and served families from a cross-section of socio-economic groups with no one group predominating. At the time of the fieldwork there were no children from ethnic minority backgrounds attending

the school. The mainstream school was located nine miles from the special school. The mainstream school had not been involved previously in the integration of handicapped children but had arranged visits and an exchange programme with children in a multi-racial school. All except one of the integration sessions were held in the mainstream school. One integration session was held in the special school.

The special school was located in an urban area in the West Midlands and took eighty children (age two to 19) from a wide region encompassing urban and semi-rural areas in a nine mile radius of the school. Some of the children in the school, and a few involved in this integration project, lived in the vicinity of the mainstream school. The children from the special school were brought to the mainstream school for integration sessions in a minibus by staff of the special school. The two year project in this study was one of a series of integration programmes initiated by the special school and involving every child in the school in placements in mainstream settings for part of the school week. It was the policy of the special school to place children with SLD in mainstream classes of children of the same chronological age.

#### 4.2.2 The mainstream classroom

The classroom in which the integration sessions (Studies 1 and 3) and interviews (Study 2) took place was in a semi-open plan school. The classroom contained tables and chairs in groups for approximately six children in each group and a carpeted area for activities such as story telling. Classroom resources were stored on open shelving and cupboards around the perimeter of the room. There was open access to the neighbouring classroom. On one side, entry was via a "quiet area" containing sinks, painting tables and access to the washroom. This "quiet area", shared by the two adjacent classes, was divided from those classrooms with curtains.

#### 4.2.3 The integration project

The setting for the data collection was an integration project, begun in September 1984, involving a class of six and seven year olds in a mainstream first school and the corresponding age group from the area special school for children with SLD. The decision to initiate the project was taken by the heads and, at their request, the researcher became involved prior to the start of the integration sessions. The educational philosophy underlying the project was then discussed by the researcher with special and mainstream school staffs. After these discussions it was decided that the

integration project should involve NH and SLD children working in cooperative NH-SLD pairs on common tasks. There was a strong commitment by the school personnel to cooperative NH-SLD activities and a desire to avoid SLD children becoming the passive recipients of help from their NH partners.

In each school year, prior to the commencement of the integration sessions, a member of staff from the special school visited the first school. He/she talked to the first school class about children with SLD and encouraged the NH children to ask questions about children with SLD. The NH children were given an explanation for SLD which focused on SLD children having physical malformations of their brains.

The integration sessions were part of the normal work of the schools. The sessions took place, nominally, once a fortnight on Tuesday afternoons for two school years in the mainstream school. In practice, sessions occurred less frequently than this as some sessions were cancelled owing to staff absence, transport difficulties or school events (for example, Christmas plays) which took precedence. Details of the number and dates of sessions and interviews are given in Appendix 1, Tables 13, 14 and 15. The number and timing of sessions were similar in the two years during which data were collected.

The mainstream and special school teachers coordinated the planning and management of each

integration session. The schools alternated responsibility for planning and leading sessions. At least one teacher from the special school and the class teacher from the mainstream school were involved in every integration session. Numbers of adults (i.e. teachers and classroom auxiliaries) involved in each integration session are given in Tables 13 and 15.

The format for each integration session was as follows:

- (a) brief introductory period during which one teacher outlined the afternoon's work.
- (b) the central (majority) part of the session (c. 15-40 minutes) during which each of the NH children was paired with a child with SLD.
- (c) a brief final period during which NH and SLD children worked as one large group for rhymes and singing games.

During part (b) of the session each of the NH children was paired with a child with SLD. Children chose their partners, in practice this usually meant that choice of SLD partner was made by NH children. Pairs varied from week to week but not within sessions. Each pair was given a joint cooperative task by the teacher leading the session. The NH children, in line with the educational philosophy of the project, were instructed to help their partners with SLD to carry out their part of the task, but not to do it for them.

In most sessions art activities were the focus of



the paired cooperative work. These art activities were drawn from ideas found typically in infant classrooms. The activities (see Tables 13 and 15) included: printing with leaves, sponges, card shapes or objects; making puppets from socks; and painting techniques using wax, string, straws or spattering paint using toothbrushes. In each activity the NH and SLD child partners carried out complementary roles; for example, the wax resist painting required the NH child to write (using a white candle) his/her name on a large sheet of paper, the SLD child then painted over this wax impression, finally the NH child wrote the names of both children on the finished picture.

The researcher (AL), prior to the commencement of the studies, told the school personnel that data collection and analyses would focus primarily on child-child interaction, not child-adult or adult-adult interaction. School personnel were instructed not to intervene in interactions between NH and SLD children during the paired activities unless intervention was necessary to prevent disruption, for example, if one child became aggressive towards another child. Consequently, the adults present during the integration sessions were aware that the researcher was focusing on child-child interaction and positioned themselves at the periphery of activity. However the adults did respond briefly to questions or requests for help from children.

The researcher was present in the classroom

throughout the sessions and acted as a non-participant observer. Observation notes were made during part (b) of the sessions as detailed in the methodology sections, reported in Chapters 5 and 7. General observation notes were made during parts (a) and (c) as during these periods the children worked as a whole group rather than in pairs. These general observation notes included information concerning:

- number and date of the integration session
- description of the room: organisation;  
materials; range and accessibility of resources
- numbers of children (NH and SLD) and adults  
(from NH and SLD schools) present
- groupings of children/adults at the start of  
part (b) of the session
- time at the beginning and end of each part of  
the session
- extent of choice for individual children  
concerning child with whom he/she worked  
and where he/she worked
- identification of teacher to lead the session
- nature of the cooperative activity.

The following three chapters describe and discuss each of the studies in turn and are followed by a general discussion (Chapter 8) drawing on findings from the three studies. In all three studies focus was explicitly on the behaviour of the NH children in NH-SLD interaction.

## CHAPTER 5

STUDY 1: NON-VERBAL AND VERBAL INTERACTION IN DYADS  
OF NON-HANDICAPPED CHILDREN PAIRED WITH CHILDREN  
WITH SEVERE LEARNING DIFFICULTIES

## 5.1 INTRODUCTION

The nature of the integration project, in which NH children were paired with children with SLD, provided an unusual opportunity to study interaction between young non-handicapped children partnering children with severe learning difficulties (NH-SLD dyads) in a naturalistic primary school setting. Study 1 was carried out, owing to the lack of comparable studies, to ascertain the advisability of focussing on discourse specifically. It was possible that little verbal interaction would occur and that focus on this alone would not be viable.

This possibility is suggested by much of the research (reviewed earlier, Chapter 1) indicating that SLD children tend to be relatively isolated in unstructured integrated settings. In addition, most

classroom integrated settings involve a relatively high ratio of NH to SLD children and this may contribute to isolation of the minority group. In the present project the numbers of NH and SLD children were equal, and children worked in NH-SLD dyads. These features were thought likely to increase interaction. The research literature (Chapter 1) also indicates that structure is an important factor in promoting NH-SLD interaction. The sessions were structured in this integration project and this structuring was thought likely to encourage NH-SLD interaction. Thus the present study involved monitoring verbal and non-verbal interactions between NH-SLD dyads during structured integration sessions which took place over one school year.

The study set out to answer several research questions. First, will NH children interact with children with SLD in a structured classroom setting and, as an extension of this, will interaction be with same or opposite sex partners? Second, will NH children interact verbally with children with SLD in a structured setting? Third, will interaction generally, and verbal interaction specifically, increase over the course of a year of integration sessions?

## 5.2 METHOD

### 5.2.1 Subjects

Ten NH children (five girls, five boys; mean age 6:6, range 6:3-6:8 in September 1984; details in Appendix 1, Table 16) from the third year class in a West Midlands' first school were selected to take part in the integration project (Study 1). The third year class was selected by the head teacher as the class teacher was enthusiastic about being involved. The 10 children were selected to participate in the project on the basis of their general maturity in the subjective opinions of the head and class teacher. The selected children were considered by the class teacher to be of above average general ability. It was decided by the head and class teacher to select equal numbers of boys and girls. Parents of the children selected for the integration project were supportive.

Each of the NH children was paired with a child with SLD. Among the 10 children with SLD (five girls, five boys; mean age 6:0, range 4:0-9:5 in September 1984, details in Appendix 1, Table 16) six had Down's syndrome and the remaining four children had unknown causes of SLD. None of the children with SLD had been involved in an integration project between their special school and a mainstream school prior to this integration project. There was no selection of SLD pupils for

participation in the project as these 10 children formed the total lower school group in the special school. Parents of these SLD children were supportive of the integration project.

Two of the seven adults (three teachers and four classroom helpers) involved, had had experience of working with NH children and pupils with SLD in integrated settings. Neither the mainstream class teacher nor her classroom auxiliary had had any previous contact with children with SLD.

#### 5.2.2 Materials

NH-SLD interaction was studied using a structured observation schedule devised for this research. Focus was on the NH children. Note was made of children absent from school or out of the classroom at the time of the observation. The schedule was divided into six broad areas:

- interaction with adults
- role of NH child
- interactee
- mode of NH-SLD interaction
- nature of contact
- manner of NH child towards SLD partner.

Each of the six areas was sub-divided:

1. Interaction with adults:

background of the adult involved i.e. from the mainstream or special school, or other, for example an LEA advisor.

2. Role of NH child:

the NH child's role in relation to the interactee. There were six sub-divisions in this section, however only one of these was applicable for a particular observation. The sub-divisions were target NH child:

- initiating contact with an SLD child,
- sustaining contact with an SLD child,
- responding to contact from an SLD child,
- solitary- doing own work,
- watching an SLD child,
- observing, or interacting with, another NH child.

3. Interactee:

number and nature of the child/children with whom the target NH child was interacting according to sex and school background.

#### 4. Mode of NH-SLD interaction:

nature of the interaction between the target child and interactee(s) according to whether interaction was:

verbal/non-verbal,  
involving materials, and/or  
gestures (specify in notes if using Makaton signs).

#### 5. Nature of the contacts:

The type of contact between the target NH child and SLD child was sub-divided into eight hierarchical sections, only one of which was coded at any single observation point. If more than one type of contact was thought to be taking place then earlier sections in the list below took precedence over subsequent sections. The sub-divisions were:

- giving information about a task (e.g. "Colour it in red")
- helping management of a task (e.g. passing scissors to SLD child),
- reporting on progress (e.g. "That looks good")
- personal question (e.g. "Do you want to wash you hands?")
- information by target NH child about self



(e.g. "My name is Marie")

- giving personal assistance (e.g. doing up SLD child's shoelaces)
- reading aloud, for example from a story book, to SLD child
- uncoded (to be specified in observation notes)

#### 6. Manner of NH child towards SLD partner

A crude measure of attitudes to SLD partner was included in the observation schedule. This was an impressionistic judgement of the manner of the NH target child towards his/her partner. Manner was coded as positive/ negative/ indifferent/ unclassifiable.

#### 5.2.3 Procedure

Advantages of structured observation schedules are discussed by Sackett (1978) and include unobtrusiveness and the coding of interaction data as it is collected. Supplementing of the observation schedule with video-recordings was considered, but rejected. Video-recordings would have required additional personnel or technical assistance and might have been disruptive to children and /or staff from the mainstream and special schools. If video recording had been carried out by the one observer available, the focus for

recording would have had to be either widely focused with a probable loss of detail, or focused on pairs of children in turn. Advantages of video-recording would have been the richness of data collected and the availability of a pool of data for reliability coding by an observer not present at the time of the recordings.

Observation schedules may be used to collect data manually, or mechanically, for example, using a lap-top computer keyboard. The latter was not possible and therefore traditional pencil and paper methods were used. The advantages of these include low cost, ordinariness to the children and portability. The latter was important as the observer had to move around the classroom to maintain an uninterrupted view of target children.

Deductive methods were used to collate a pool of possible items for inclusion in the observation schedule. These items were drawn from published reports of studies involving classroom observation (Galton, Simon and Croll, 1980; Bennett, Desforges, Cockburn and Wilkinson, 1984) supplemented with items from research on interaction between handicapped and NH pupils (see Chapter 1).

The observation schedule was piloted in a mainstream class of five to six year olds in a school in a neighbouring LEA. No known situation was directly comparable to the integration project and therefore, in the pilot work, observations focussed on interactions

between mainstream and hearing impaired children. Minor revisions were made to the schedule as a result of this procedure.

The observation schedule was used during the period of the integration session in which the children worked in cooperative NH-SLD pairs (see 4.2.3). In each integration session each NH child was observed in turn. The sequence of children observed was consistent between, and within, sessions. Point sampling was used on a fixed time interval schedule with the NH children being targeted at 30-second intervals. A time interval of 30 seconds was considered the optimum interval between observations. It has been used in other observation work involving young children in school settings (for example, Sylva et al. 1980). This interval permitted observations as frequently as possible allowing for time to locate the target child and to record data on the coding sheet. In some cases, for example, when a child was working on his/her own and not interacting with his/her partner the coding sheet was completed relatively rapidly. However if the NH child was interacting with his/her SLD partner then up to 30 seconds were required to complete the various sections.

Recordings of interactions of each NH child (one child each 30 seconds) were completed in five minutes. A stopwatch was used to maintain a consistent interval between observations. Observations were coded on a

standard observation sheet (example in Appendix 2) at the time of the observations. This method of point sampling did not provide either a continuous record of sequences of interaction or total counts of specific behaviours.

#### 5.2.4 Reliability

Arrangements were made for a second rater to complete observation schedules on two occasions however this did not take place owing to illness of the second rater.

### 5.3 RESULTS

The observation schedule was used in 10 integration sessions (details in Appendix 1, Table 13) and there were 374 observation points. In 49 of these observation points the target child was out of the classroom. Data presented here are based on observations of children in the classroom and percentages are given out of this total (i.e. 325 observation points). Data have been grouped across sessions for statistical analyses. For these purposes sessions have been grouped as:

first phase: sessions 1, 2 and 4 inclusive,

second phase: sessions 5-7 inclusive, and

third phase: sessions 9-12 inclusive.

These phases corresponded approximately to autumn, spring and summer school terms respectively.

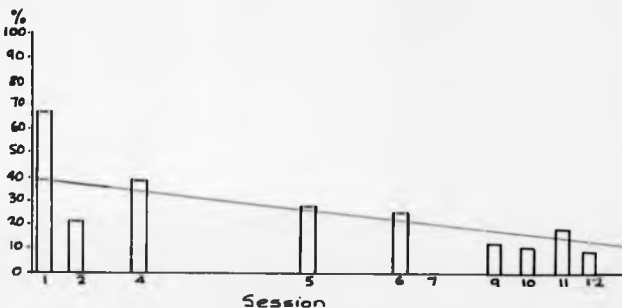
Results are presented under the sections used in the observation schedule (5.2.2) and will be examined in terms of the overall pattern, changes over time and significance of sex of NH child. Raw data for numbers of observations in observation categories in each session are given in Appendix 1, Tables 17 and 18.

### 5.3.1 Interactions with adults

NH children were interacting with adults in 21.8% of all classroom observations. 59.2% of all interactions with adults were with those from the special school.

Figure 1 shows that interactions with adults (special and mainstream grouped) decreased markedly across the three phases (probit curve intercept= 4.79, slope=-0.06). NH children interacted with adults in 33.1% of all observation points in the first phase. This decreased to 22.2% of observations in the second phase and dropped further, to 9.8% of observation points, in the third phase of the integration project. There were no statistically significant differences in the numbers of interactions with adults in the three time phases for NH boys compared with NH girls.

Figure 1: Non-handicapped children's interactions with adults as a percentage of total classroom observations in each integration session.



Horizontal axis represents time scale over one school year.

Red line shows probit trend analysis

### 5.3.2 Role of non-handicapped child

#### 5.3.2.1 Initiating or sustaining contact with, or responding to contact from, SLD child

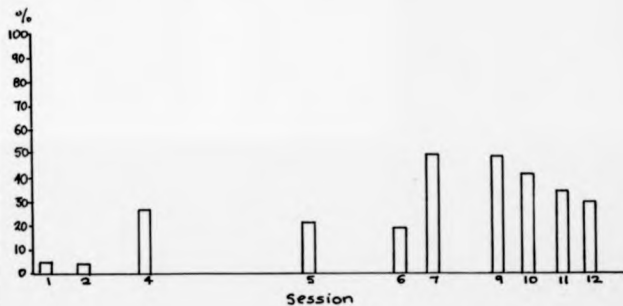
NH children interacted with SLD partners in 24.3% of all classroom observations. Interactions with SLD partners increased in successive time phases of the integration project (see Figure 2). NH-SLD interaction comprised 13.1%, 22.2% and 37.4% in the first, second and third phases of the project respectively, as a percentage of classroom observations in each phase. This increase was statistically significant ( $\chi^2 = 21.21$ , d.f.=2,  $p < .001$ ). However, within the third phase of the project (sessions 9-12), NH-SLD interaction began to decline slightly.

There were no statistically significant differences in numbers of interactions with SLD partners across the three phases by NH boys compared with NH girls ( $\chi^2 = 0.3$ , d.f.=2).

It was decided that it was not possible to make a reliable distinction between initiating and sustaining contact with SLD partner. Consequently data from these two categories have been combined in the results. 92.4% of all NH-SLD interactions were initiated /sustained by NH children. Few observations showed NH children responding to SLD partners (6 observations in total), indicating that NH-SLD interaction was dominated by the



Figure 2: Non-handicapped children's interactions with children with severe learning difficulties, as a percentage of total classroom observations in each integration session.



Horizontal axis represents time scale over one school year.

NH children.

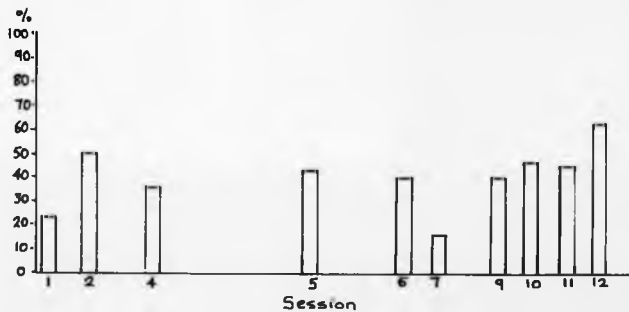
5.3.2.2 Non-handicapped children engaged in  
solitary behaviours, watching an SLD child  
or observing/ interacting with another  
non-handicapped child.

Interactions with adults and contacts with SLD partners accounted for 46.2% of all classroom observations. The remaining classroom observations consisted of NH children working alone without reference to SLD partners (42.2%), watching SLD partners (10.8%) or interacting with mainstream classmates (0.9%).

Figure 3 shows that solitary behaviours by NH children occurred more in the third phase (48.8%) than in the first (39.2%) or second phases (36.1%) of the integration project, as percentages of classroom observations in each phase. The change over time was not statistically significant. The amount of time engaged in solitary behaviour by NH boys compared with NH girls was also not statistically significant.

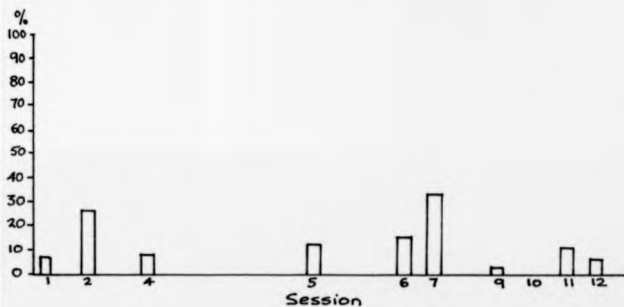
Watching SLD partners occurred in all sessions but was higher in first and second, than in the third phase (see Figure 4). The difference between amounts of time spent watching SLD partners in the three phases was statistically significant ( $T^2 = 9.07$ , d.f.=2,  $p < .02$ ).

Figure 3: Non-handicapped children's solitary behaviour as a percentage of total classroom observations in each integration session



Horizontal axis represents time scale over one school year

Figure 4: Non-handicapped children's watching of children with severe learning difficulties, as a percentage of total classroom observations in each integration session



Horizontal axis represents time scale over one school year

### 5.3.3 Interactee

It has been shown that a high proportion of observed interactions involved NH children working alone or interacting with adults, consequently analyses of NH-SLD interaction are based on a relatively small number of observation points (i.e. 24.3%, 79 observations). The large majority (94.9%) of these NH-SLD interactions were between same sex children.

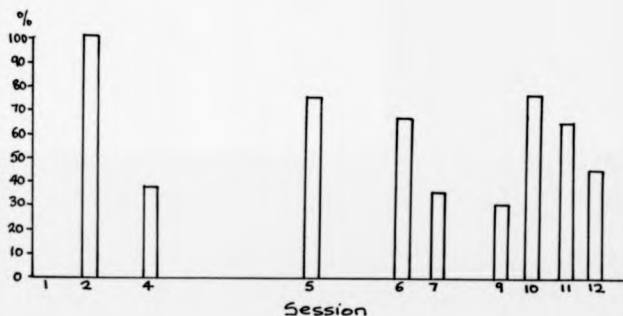
### 5.3.4 Mode of NH-SLD interaction

NH-SLD contacts were divided approximately equally between verbal (51.9%) and non-verbal (48.1%) modes of communication. The difference between NH boys and NH girls in their usage of verbal and non-verbal communication was not statistically significant. As noted above, interactions in total increased across the three phases of the project but changes in the proportion of verbal, compared with non-verbal, interactions across the three time phases was not statistically significant. However it can be seen from Figure 5 that verbal interaction tended to increase over time.

### 5.3.5 Nature of NH-SLD contact

The largest category of NH-SLD interactions

Figure 5: Non-handicapped children's verbal interaction with children with severe learning difficulties, as a percentage of total NH-SLD interaction in each integration session.



Horizontal axis represents time scale over one school year

(51.9%) focused on management of the joint task. NH children giving information about the task, assistance to the SLD child or personal information, were all relatively infrequent (29.1%, 12.7% and 6.3% of all NH-SLD contacts, respectively). Use of the two main types of focus (i.e. task management and task information) did not differ significantly statistically across the three phases of the integration project. There were no observations of reporting on progress, asking a personal question, or reading aloud. It is possible that all the verbal categories were under-represented because, from a distance, non-verbal contact was perceived more readily than verbal contact.

#### 5.3.6 Manner of NH child towards SLD partner

The observation schedule included an impressionistic judgement of attitude held by the NH child towards his/her SLD partner. Manner was generally positive (78.5% of observation points) and there was only one instance of a NH child expressing a negative manner towards the SLD partner. There were no statistically significant changes in manner between phases or between NH boys and NH girls.

## 5.4 DISCUSSION

### 5.4.1 Discussion of findings

This study set out to answer questions concerning whether or not NH children of infant school age would interact, in a structured classroom setting, with peers with SLD. It was found that interaction did occur and that there was much greater interaction with same-sex, than with opposite sex, SLD partners. This is consistent with findings of researchers investigating cross-age interaction. Interestingly, the percentage of observations in which NH and SLD children were interacting (24.3%) in the study reported here was very close to the figure (23.5%) obtained by Voeltz and Brennan (1984) in their investigation of "elementary school" pupils in dyadic interactions with classmates with SLD.

Manner of NH children towards children with SLD was generally positive and, unlike some studies which have found the handicapped to be better accepted by NH girls than by NH boys at upper primary and secondary school levels, no sex differences in manner with SLD children were found in the present study. This may reflect the relatively young age of the NH children. Studies of NH-SLD interaction at pre-school and infant



school levels (for example, Sebba, 1983; Pieterse and Center, 1984) have not found significant sex differences in interaction with, or sociometric ratings of, SLD partners.

A second question underlying the present study concerned whether or not there would be spontaneous verbal interaction between NH and SLD children. The results showed that both NH boys and NH girls talked with partners with SLD. Consequently this study supported the viability of focusing specifically on NH-SLD discourse.

The third question which the present study set out to answer was: will NH-SLD interaction increase over a year of integration sessions? This study found a curvilinear pattern of NH-SLD interaction over time with an increase in interaction followed by a slight decrease over the last third of the year's sessions. Many of the features noted earlier as promoting helping behaviours were present in this study and may have fostered NH-SLD interaction. The slight decline in NH-SLD interaction in the last phase of the project, combined with the increase in solitary behaviours by NH children, may have reflected the widening developmental gap between NH and SLD children over the year of integration sessions.

The proportion of interactions which were with adults was initially high but declined over time. It is possible that NH children found out about SLD children through interactions with adults, particularly

special school adults. Information concerning the content of conversations between NH children and adults from the special school (not collected in the study reported here) would clarify this point. Recognition of this led to the focus on NH children's utterances to both adults and SLD children in Study 3 which took place during the following year of the integration project (reported in Chapter 7).

The present study differed from much reported research on NH-SLD interaction in a number of ways. First, the age group of these NH children was slightly older than in most published studies. Second, the NH:SLD ratio was unusually low and encompassed a large number of NH-SLD dyads. This, combined with the structured setting, meant that NH children who may have preferred not to work with SLD children (and vice versa) could not readily move away from them. SLD children could have been avoided if the NH:SLD ratio had been more typical of classroom integration (e.g. 15:1). However in that situation NH-SLD interaction may be predominantly by a small number of self-selected NH children who may be atypical of NH peers.

A third difference between this research and other studies involving young NH children is that interaction was assessed here in a tightly structured setting rather than during "free play". Comparisons of NH-SLD interaction in "free play" and structured settings

suggests that interaction is greater in structured settings (Chapter 1). Therefore the explicit role of NH children in the study reported here, frequently reinforced by the adults present, as tutors to SLD partners, is likely to have increased numbers of NH-SLD contacts.

#### 5.4.2 Limitations of the study

The results of the present study were obtained through the use of an observation schedule. This approach had a number of limitations, concerning both the coded categories and the use of point sampling on a fixed time schedule.

One limitation of this approach was that behaviours were pre-specified and consequently behaviours which may have developed over time, for example sub-categories of verbal behaviour, were omitted. Infrequent behaviours may also have been under-represented due to the use of point sampling on a fixed time schedule. For example, NH children occasionally smacked SLD partners but no instances of this were recorded because no observation point happened to coincide with this, relatively rare, occurrence. Point sampling also caused difficulties in coding behaviours which could only be coded reliably if the preceding sequence of behaviour was known, for example "responds to partner". Related to this, the sampling

method precluded any monitoring of sequences of behaviour. In addition, the focus on the NH children meant that no data were obtained directly about the children with SLD.

The figures given for percentages of interaction with SLD partners may be an under-estimate as "watching SLD partner" could be classified as a form of non-verbal interaction. "Watching SLD partner" did not distinguish between staring detachedly at an SLD partner and watching the child carry out a task. The latter might be regarded as an integral part of a sequence of interaction. However a distinction between the two types of watching SLD partner would have been difficult to make reliably, given the use of instantaneous codings using unrecorded interactions.

NH-SLD interaction was observed during one type of activity- art and craft activities. Although this led to consistency in the context across sessions, the results may be unrepresentative of NH-SLD interaction in the wider classroom situation. The focus of art/ craft may have stimulated more solitary behaviour (as noted in work on cross-age interactions) than would have been found in, for example, domestic play.

The present study focused on NH children's behaviours in an integrated classroom, this provided quantitative measures of the proportion of total time in which NH-SLD interaction occurred, but yielded relatively little data about the quality of this

interaction. The need to investigate more closely the quality of NH-SLD interaction gave rise to the subsequent two studies.

#### 5.4.3 Directions for the following studies

The present study found that NH-SLD interaction increased generally over time and that NH children had a positive manner towards SLD partners. Increased NH-SLD interaction may have been a direct reflection of changing attitudes of NH children towards children with SLD. A more precise measure of attitudes was needed to test the nature of affective attitudes towards SLD children, knowledge of SLD and how these changed with experience of children with SLD. This point led to a focus on attitudes in Study 2 (reported in the following chapter).

The study reported here showed that sufficient NH-SLD verbal interaction took place to justify focusing on analyses of this in the following year of the integration project (Study 3, reported in Chapter 7). Such analyses may reveal the quality of NH-SLD interaction.

## CHAPTER 6

STUDY 2: ATTITUDES HELD BY NON-HANDICAPPED SIX  
AND SEVEN YEAR OLDS TOWARDS PEERS WITH  
SEVERE LEARNING DIFFICULTIES

## 6.1 INTRODUCTION

Study 1 focused on NH-SLD dyadic interaction and included a measure of manner. The results from Study 1 indicated that NH children were generally positive towards SLD partners and interacted with SLD children. The research literature on attitudes towards the handicapped produced conflicting findings concerning the effects of contact on attitudes towards handicapped children (Chapter 2). However structured contact, a feature of this integration project, has been repeatedly associated with increases in liking for, and interaction with, SLD classmates in children of upper primary and secondary school ages.

The assessment of attitudes is hindered by the limitations of many approaches to attitude measurement

when applied to young children. Katz (1982) developmental sequence of the changes in racial concepts and attitudes illustrates the complex and subtle changes in attitudes which are taking place in the early years of schooling (Chapter 2). Similarly research into young children's verbal statements about others (for example, Livesley and Bromley, 1973) illustrates tendencies for young children to focus on, for example, physical characteristics and single univalent traits, when describing other people. These features of young children's social cognition are likely to emerge in children's expressed attitudes.

The first aim of the study reported here was to compare attitudes held towards children with SLD with attitudes held towards classmates with difficulties. This stemmed from the work of Jenkinson (1983) who suggested that children who are not expected to perform well in the class, are received more sympathetically than are classmates with no obvious causes of their difficulties.

The second aim of the present study was to investigate the nature of attitudes held towards children with SLD. Affective attitudes towards SLD children, and knowledge of SLD were examined separately as Rose (1981) and Scherrer (1984) suggest that these are two independent dimensions of attitudes towards the handicapped.

## 6.2 METHOD

### 6.2.1 Subjects

Ten children (five girls, five boys, mean age 6:5 range 6:1-6:10 in September 1985, details in Appendix 1, Table 19) from a class of 31 six and seven year olds were involved in the present study. They came from the same mainstream first school as that used in Study 1. These children were chosen by random selection for participation in the second year of the integration project. The children thus identified were considered by the head and class teacher to be representative of the ability range in the class. The class contained some children with mild learning and/or emotional difficulties, several of whom were included among the ten selected children. Four of the children had younger siblings. One child, CA, left the school at Christmas but all other children participated in the project for the complete school year.

It was not possible to extend the study to a larger number of children as only these nine children were involved for the complete year of the integration project and no similar project was known. Interest was in changes in affective attitudes and knowledge of children in the six to seven year age band who had had one-to-one experience of children with SLB.

A comparison group of three children were selected



at random from the same class as the children detailed above. The comparison group children (details in Appendix 1, Table 19) did not participate in the integration project.

#### 6.2.2 Materials

A semi-structured interview schedule was used to assess attitudes, as it was considered to be the most reliable instrument to use with this age group of children in the context of attitudes to peers with SLD. It had the advantage that it made use of the children's familiarity with the interviewer, was flexible, and the semi-structure eased coding and classification of data for analysis. It also permitted the interviewer to change the approach or give the child a break if he/she became tired, bored or uncomprehending. The relatively small number of children to be interviewed made this approach a possibility. A large number of subjects would preclude the use of interview techniques unless there was more than one suitable interviewer available. The use of a semi-structured interview schedule was also favoured because research evidence (for example, Rogers, 1978) suggests that children's responses are more sophisticated when replying to questions than when giving an unprompted account.

However there are disadvantages in the use of semi-structured interviews. These include the

possibility of interviewer bias by shaping responses inadvertently (for example, developing desired responses and attenuating undesired responses) and/or differential framing of questions and responses to male and female interviewees (Evans, 1986). There are also difficulties in using semi-structured interviews with young children; the children may become tired and give minimum responses, it is difficult to repeat the procedure to obtain test-retest reliability measures, and deviations from the planned structure of the interview may generate rich data but be difficult to code systematically.

Other approaches to measuring attitudes in young children have substantial disadvantages. Questionnaire measures require some reading ability unless questions are read out to the children. If questions are read out, and children (for example) circle appropriate degrees of "smiley" faces, this avoids the need for children to read the questions or alternative responses. However it provides a rather crude measure of attitudes and has problems of central tendency and perseveration (Brenner et al., 1985).

Structured interviews lack the flexibility to probe reasons for responses or to take advantage of unexpected responses. Unstructured interviews are difficult to code and analyse. G-sort and semantic differential techniques have sometimes been used with young children (for example, Asher et al., 1979) although some of the same problems of providing expected

responses (noted above concerning semi-structured interviews) may occur. These techniques also, if used alone, preclude the probing of attitudes.

#### 6.2.2.1 First interviews

The first interview focused on attitudes towards classmates thought by interviewees to be "not very clever" or needing "a lot of help" (schedule given in Appendix 2). For both these categories interviewees were first asked to nominate classmates in each of these groups. Interviewees were then asked to explain:

- affective attitudes towards those classmates (coded as positive, mixed, negative, or no response/ don't know);
- descriptors of those classmates (coded as physical, behavioural, cognitive, or no response/ don't know);
- possible causes of difficulties (coded as physical, behavioural, cognitive, home, school, or no response /don't know);
- the prognosis (coded as can change, can't change, no response/ don't know); and
- the extent to which children with difficulties were responsible for having problems (coded as high, mixed, or low volition, or no response /don't know).

#### 6.2.2.2 Second interviews

Second interviews focused on children with SLD (schedule given in Appendix 2).

Comparisons with attitudes towards classmates with difficulties:

Affective attitudes, descriptors, causes of difficulties, prognosis and volition of children with SLD, were probed and coded as in the parallel questions, given in the first interview.

Affective attitudes towards SLD children:

In addition, affective attitudes towards children with SLD were examined in two ways.

(i) Identification of a special friend; each NH child was asked about a special friend among the group of children from the special school and whether or not the NH child wanted to play with the SLD child in the playground, have the SLD child home to tea and/or to stay overnight.

(ii) The strength of affective attitudes; this was probed by responses to six pairs of descriptors (hard-working/not hard-working, happy/sad, brave/not brave, strong/weak, clever/not clever, fun/boring). The selection of pairs of descriptors was based on the most frequently used descriptors produced by the children involved in the unstructured interviews

described above. Responses to the pairs of descriptors were rated on a five point scale from one (negative) to five (positive).

#### Knowledge of SLD.

This was assessed in two ways:

(i) through specific questions focusing on the nature of the Special School (curriculum, organisation and staffing) and probable adult lives of children with SLD. Responses were coded as realistic or not realistic.

(ii) by coding responses to all questions according to the type of physical explanation for SLD (sensory impairments, motor disabilities, young age, "bad brains", or sickness) to which reference was made. "Mentions" for each of these five explanations were coded. A "mention" was calculated as reference to one of these organising models in an utterance. Two references within an utterance (e.g. "What are the [Special School] children like?" Response: "They got bad ears and they can't hear properly") was coded once only.

#### 6.2.2.3 Third interviews

Schedules used in the first and second interviews were used together in third interviews.

### 6.2.3 Procedure

Unstructured interviews were carried out in February, 1985 to generate a pool of possible topics around which a semi-structured interview could be compiled. The unstructured interviews were carried out with six children, ages six and seven, in a primary school that integrated children with hearing impairments. The interview questions generated by this process were supplemented with questions derived from the work of other researchers investigating attitudes towards the handicapped (reviewed in Chapter 2).

The interview schedules were piloted with the NH children involved in Study 1 and minor revisions made in the light of this.

Shortly before the commencement of integration sessions a semi-structured interview schedule was used to assess the attitudes of the NH children to classmates thought to be "not very clever" or needing "a lot of help". A second interview, focusing on affective attitudes towards, and knowledge about, children with SLD took place after two integration sessions (Lewis and Lewis, 1987).

The schedules used in the first and second interviews were used without alteration in the third interviews. The third interview was carried out with each NH child after 11 integration sessions. The integration sessions took place in the autumn, spring

and summer school terms. Dates of interviews and sessions are given in appendix 1, tables A2 and A3.

All three interviews were carried out in a quiet area adjacent to the children's classroom (described in Chapter 4). Each interview lasted 20-40 minutes and was recorded using a desk top cassette recorder. Children who were absent were interviewed shortly after their return to school.

#### 6.2.4 Reliability

A sub-sample of 5/27 (18.5%) of the interview transcripts were coded independently by a second rater. Agreement of codings of descriptors and causes was high (91.2% overall). Agreement of ratings of traits was also high (kappa=.86).

### 6.3 RESULTS

Data for CA, who left the school between second and third interviews, have been excluded from these results. Data from the other nine children in Study 2 are given in detail in Appendix 1, Tables 19-26.

Attitudes towards mainstream classmates with difficulties focused on children nominated by interviewees as being "not very clever" or needing "a lot of help". Identities of these children will be considered before examining results concerning the nature of attitudes towards those children.

#### 6.3.1 Nominations of mainstream classmates with difficulties

Children were asked to name classmates thought to be "not very clever" or needing "a lot of help". (The children named are given in Appendix 1, Table 20.) Several children involved in the study reported here were named by other children as being "not very clever" and/or needing "a lot of help". This supported the class teacher's view that the subjects of this study included



children with learning difficulties. Nineteen children in the class were nominated for the "not very clever" and/or need "a lot of help" groups in first and/or third interviews. There was some fluctuation between first and third interviews in the children nominated for the different groups of classmates with difficulties. Consequently results are not focusing on attitudes to a small number of children with well-established and relatively permanent reputations for having difficulties.

The study reported here set out to answer three research questions: are SLD classmates received more sympathetically than classmates with difficulties? Do NM children increase liking for SLD classmates after experience of those children? And, is this experience associated with increases in knowledge of SLD? The results will be presented in three sections relating to each of these research questions.

6.3.2 Attitudes towards children with SLD compared with  
attitudes towards mainstream classmates with difficulties

Affective attitudes

Summary results concerning affective attitudes towards classmates thought to be "not very clever", classmates thought to need "a lot of help", and children with SLD, are given in Table 1. In the first interviews (September, 1985) there was no consensus among interviewees about affective attitudes towards either classmates thought to be "not very clever" or classmates thought to need "a lot of help". However, all children expressed at least partially positive attitudes towards children with SLD.

This position changed slightly in third interviews (June, 1986). Table 1 shows that affective attitudes towards "not very clever" classmates became slightly more negative (i.e. four of the seven children responding to questions in this section in both interviews, became more, or remained, negative in third compared with first interviews). This contrasted with affective attitudes towards classmates thought to need "a lot of help". Six out of the eight children responding in both interviews, became more, or remained, at least partially positive about this group. Affective attitudes towards SLD children changed slightly but remained predominantly strongly positive.

Table 1: Numbers of NH children expressing positive, mixed, or negative affective attitudes towards: mainstream classmates thought to be "not very clever" or needing "a lot of help" and known children with SLD; or making no definite response (no response/ don't know - NR/DK), in first or second, and third interviews.

AFFECTIVE ATTITUDES TOWARDS CLASSMATES THOUGHT TO BE "NOT VERY CLEVER"

		First interviews			NR/DK	Total (N=9)
		Positive	Mixed	Negative		
Third interviews	Positive		3			3
	Mixed					0
	Negative	2	1	1		4
	NR/DK	1		1		2
	Total	3	4	2	0	9

AFFECTIVE ATTITUDES TOWARDS CLASSMATES THOUGHT TO NEED "A LOT OF HELP"

		First interviews			NR/DK	Total (N=9)
		Positive	Mixed	Negative		
Third interviews	Positive	1	3			4
	Mixed			2		2
	Negative	2				2
	NR/DK			1		1
	Total	3	3	3	0	9

AFFECTIVE ATTITUDES TOWARDS KNOWN CHILDREN WITH SLD

		Second interviews			NR/DK	Total (N=9)
		Positive	Mixed	Negative		
Third interviews	Positive	6	1			7
	Mixed	1				1
	Negative		1			1
	NR/DK					0
	Total	7	2		0	9

Knowledge of difficulties

## Descriptors

As shown in Table 2, mainstream classmates who were thought to be "not very clever" or needing "a lot of help" tended to be described in behavioural and/or cognitive terms. Behavioural terms focussed on naughtiness (for example, WA and JD: "They run/thump"), justifiable reprimands from the teacher, and self-inflicted difficulties. Cognitive descriptors referred to attainments on school tasks, for example reading, and were applied to children needing "a lot of help" and to children thought to be "not very clever". There was an increase between second and third interviews (from two to five children) in reference to cognitive aspects of functioning of SLD children.

Classmates thought to be "not very clever" and classmates thought to need "a lot of help" were described in ways which were similar to one another. However SLD children were described differently from the two groups of classmates in that strong emphasis was placed on the physical characteristics of children with SLD (see Table 2). In both second and third interviews, descriptors given of the children with SLD illustrated a concern with physical attributes and appearances. Different hypothesised physical causes of SLD will be examined later when changes in knowledge of SLD are

examined. Descriptors used by individual children were similar across the second and third interviews with references on both occasions to physical descriptors (seven children) and/ or SLD children's behaviour (five children).

Children with SLD were described in terms of their misbehaviour by six children in second interviews and seven children in third interviews (see Table 2). One child (SM) stated explicitly that the SLD children had become increasingly naughty: "When we first had them they acted just like normal, ...now they're not so good". One child (third interview), when asked why SLD children were naughty, attributed their naughtiness to boredom:

It could be that they get fed up of all these things... I think they're really happy when they stay at their school, when they're here they get bored...When they're over their school they think it's ever so good cos they know where all (the) things are (EL)

Interestingly, interviews with the three comparison group children who were not involved in the integration project, showed that the classroom gossip had included tales of misbehaviour of the children with SLD. Two of these three children cited misbehaviour of

Table 2 : Numbers of NH children giving descriptors of mainstream classmates thought to be "not very clever" or needing a "lot of help", or children with SLD; as physical (P), behavioural (B) and/or cognitive (C), or making no definite response (no response/ don't know- NR/DK) in first or second, and third interviews.

DESCRIPTORS OF CLASSMATES THOUGHT TO BE "NOT VERY CLEVER"

		First interviews					C	P+B+C	NR/DK	Total (N=9)
		P	P+B	P+C		B	B+C			
Third interviews	P									0
	P+B									0
	P+C									0
	B					1	2	1		4
	B+C			1				1		2
	C					1	1			2
	P+B+C									0
	NR/DK					1				1
Total		0	0	1	3	3	2	0	0	9

DESCRIPTORS OF CLASSMATES THOUGHT TO NEED "A LOT OF HELP"

		First interviews					C	P+B+C	NR/DK	Total (N=9)
		P	P+B	P+C		B	B+C			
Third interviews	P									0
	P+B									0
	P+C									0
	B					2		1		3
	B+C					1				1
	C							2	1	3
	P+B+C									0
	NR/DK						1	1		2
Total		0	0	0	3	1	4	0	1	9

DESCRIPTORS OF KNOWN CHILDREN WITH SLD

		Second interviews					C	P+B+C	NR/DK	Total (N=9)
		P	P+B	P+C		B	B+C			
Third interviews	P								1	1
	P+B		3							3
	P+C		1							1
	B									0
	B+C							1		1
	C									0
	P+B+C	1	1	1						3
	NR/DK									0
Total		1	5	1	0	0	0	1	1	9

children with SLD as their reasons for having reservations about being involved in the integration projects: "I've heard that some of them [NH classmates] can't control them" and "SH (NH girl) said that sometimes they're pests".

#### Causes of difficulties and prognosis

Hypothesised causes of difficulties of classmates, given in first and third interviews, and of SLD children, given in second and third interviews, are summarised in Table 3. Most of the children stated, in first and/or third interviews, that difficulties of children thought to be "not very clever" were caused by those children's behaviour (for example, not listening to the teacher). In keeping with this, a large majority of the children believed that classmates who were "not very clever" could change.

Several children (one in the first interview and five in the third interview) did not respond to questions about causes of difficulties for children needing "a lot of help". Among the children who did answer these questions, behaviour was mentioned in first interviews, but rarely in third interviews, as a hypothesised cause of difficulties. Environmental factors were cited as causes of needing "a lot of help" by three of the four children responding to this

question in the third interviews. Few children were able to answer questions about the likelihood of this group of children changing. However most respondents said that children needing "a lot of help" could change.

Causes of difficulties for children with SLD were described as predominantly physical, both before and after substantial experience of SLD children. In second interviews, physical causes were mainly innate (for example, "born that way") or a sickness but in third interviews other physical causes were mentioned (for example: "He doesn't eat the right stuff at home", "They could have got under their dads or their mums feet...so they could have pushed them and they could have fell or something"). Table 3 shows that after one school year of integration sessions, physical causes were still important, but not exclusively so. In third interviews two children mentioned non-physical causes of SLD ("The mum didn't teach him at home") or behaviour of the children with SLD ("They worry...they don't try") in addition to physical causes.

Projections about the future for the children with SLD were, like hypotheses about the SLD school, generally slightly more realistic after integration sessions. There was a shift towards a more balanced view of the adult life of the children with SLD as mainly normal, with some limitations (for example: "They'll be grown up...they'll not have children ... sometimes they'll need looking after"). Six children in second



interviews were generally unrealistic about the future for children with SLD and expectations over-estimated those children's abilities. Only three children were similarly unrealistic in third interviews.

#### Volition

Most of the children in first, and in third, interviews attributed lack of cleverness in a classmate to the child's own fault. Only one child was consistently (i.e. in first and third interviews) definite that part of the cause lay in factors external to the child with difficulties.

Classmates thought to need "a lot of help" were described more sympathetically than classmates thought to be "not very clever". Seven of the children stated in first interviews that, to some extent, children who needed "a lot of help" were themselves to blame for this. However this view was held by only three of the children in third interviews.

This was closer to attitudes towards SLD children who were also not described generally as responsible for their difficulties. The extent to which the children with SLD were seen as responsible for their condition was very low in both second and third interviews. All except one child in the second interviews and all children in the third interviews stated that SLD were not the children's own fault.

These results show that children with SLD were seen differently from classmates with difficulties. In general this difference reflected more sympathetic views of SLD children compared with classmates. In particular children with SLD were described more positively than classmates thought to be "not very clever". The following two sections examine attitudes held towards children with SLD in more detail.

Table 3: Numbers of NH children attributing difficulties of classmates thought to be "not very clever" or needing a "lot of help", or SLD children; to physical (P) behavioural (B) cognitive (C) and/or home/school (H/S) causes or making no definite response (no response/ don't know- NR/DK), in first or second, and third interviews.

HYPOTHESED CAUSES OF DIFFICULTIES OF CLASSMATES THOUGHT TO BE "NOT VERY CLEVER"

	P	First interviews		H/S	NR/DK	Total (N=9)
		B	B+H/S			
P		1				1
P+B						0
P+H/S						0
B		4	1			5
B+H/S				1		1
B+H/S+C						0
C						0
H/S						0
NR/DK	1			1		2
Total	1	5	1	2	0	9

HYPOTHESED CAUSES OF DIFFICULTIES OF CLASSMATES THOUGHT TO NEED "A LOT OF HELP"

	P	First interviews		H/S	NR/DK	Total (N=9)
		B	B+H/S			
P						0
P+B						0
P+H/S						0
B		1				1
B+H/S						0
B+H/S+C				1		1
C						0
H/S		1			1	2
NR/DK	1	2		2		5
Total	1	4	0	3	1	9

HYPOTHESED CAUSES OF DIFFICULTIES OF CHILDREN WITH SLD

	P	Second interviews		H/S	NR/DK	Total (N=9)
		B	B+H/S			
P	7					7
P+B	1					1
P+H/S	1					1
B						0
B+H/S						0
B+H/S+C						0
C						0
H/S						0
NR/DK						0
Total	9	0	0	0	0	9

### 6.3.3 Affective attitudes towards children with SLD

The results given above showed that children with SLD were regarded positively shortly after integration sessions had begun and this was sustained after more substantial experience of SLD children. Two other sets of measures of affective attitudes were included in this study: identification and activity preferences with an SLD child (questions 32-35 in interview schedule, see Appendix 2) and ratings of SLD children on six pairs of traits (questions 23-28). Results on these measures will be examined and compared with the earlier findings.

#### 6.3.3.1 Identification of a special friend

Eight of the NH children claimed to have a "special friend" after only two integration sessions and four of the NH children knew the name of that friend. After a school year of integration sessions all except one NH child claimed a "special friend" and seven could name their friends.

The NH children were initially more enthusiastic about playing in the playground with the friends with SLD than about having the children home to tea or to stay overnight. By the end of the year this still applied and the number of NH children wanting to take "special friends" home decreased from six to four. This

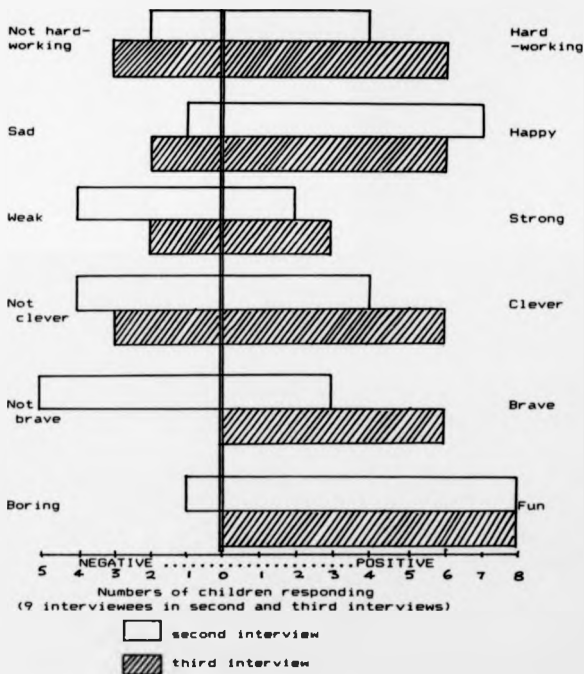
did not reflect an increased disinclination generally to invite children home. It appears that although the NH children involved in the integration sessions with children with SLD became generally more positive about those children this did not extend to wanting to invite "special friends" home.

In third interviews most of the six and seven year old NH children were enthusiastic about sharing their classroom with children from the special school on a full-, not just part-, time basis. Reservations tended to be practical, for example, "There wouldn't be enough seats; Miss A. (class teacher) wouldn't have enough paper".

#### 6.3.3.2 Strength of affective attitudes

Figure 6 shows that, in general, the ratings by NH children of traits in SLD children remained, or became more, positive after extended contact with children with SLD. (Detailed results are given in Appendix 1, Tables 23 and 26.) The increase in positive ratings was statistically significant (sign test (one-tailed),  $z=5.1$ ,  $p<.01$ ). Exceptions to this increase in positive ratings concerned "happy/sad" for which the children with SLD were rated slightly more negative (i.e. sad) after extended contact than after only two integration sessions, and "hard-working/not hard-working" which was rated as more negative by some children, and more

Figure 6: Numbers of children giving negative or positive ratings of SLD children on each of six pairs of traits in second and third interviews (neutral ratings excluded)



positive by others, after extended contact.

The greatest change in ratings between the second and third interviews concerned "brave/not brave" for which the children with SLD were rated considerably more positively (i.e. brave) after extended contact. The changes in ratings on traits were not accounted for by one or two children shifting from very positive to very negative or the reverse.

The findings concerning special friends, and the ratings of traits, confirm the findings in the first section of the results. Children with SLD were received positively by NH children near the beginning and at the end of the integration project. Experience of SLD children was not associated with increased negative affective attitudes.

#### 6.3.4 Knowledge of children with SLD

Twelve questions in the interview schedule (questions 36, 40, 41, 43, 44, 48-54; see Appendix 2) focused on changes in knowledge of SLD. Responses to these questions showed greater knowledge of SLD, i.e. increased realism about the SLD school and probable adult life for SLD children, after substantial experience of SLD children. Mean scores on these 12 questions were 5.8 (second interviews; range 3-8, s.d. =1.4) and 7.7 (third interviews; range 6-12, s.d. 2.06). All children maintained or increased knowledge of SLD

between second and third interviews. The change between the two interviews was statistically significant (randomisation test for matched pairs, two-tailed,  $p < .05$ )

Changes in knowledge of SLD were also explored by examining the explanations of SLD to which NH children referred. As has been shown above (6.3.2.2) physical descriptors and physical causes of SLD were prevalent in both second and third interviews. However, as shown in Table 4, the NH children varied in their use of different types of physical explanations for SLD. Use of particular physical explanations recurred in responses concerning descriptors, causes, prognosis and volition of SLD children. For example, for some children a belief that SLD children had sensory impairments was expressed through descriptors ("funny ears"; "special language cos they can't hear"), causes ("bad ears when they were born"), prognosis ("will always be that way.. their ears can't be made better") and volition ("not their fault, their ears are bad"). Five physical explanations for SLD (sensory impairments, motor disabilities, young age, "bad brains", and sickness) were used in second and/or third interviews. Each of these physical explanations for SLD will now be examined.



Table 4: Numbers of utterances, by each NH child, in which reference was made to one of five physical explanations for SLD (sensory impairments, motor disabilities, young age, "bad brains" and sickness) in second and third interviews.

<u>Second interviews</u>						TOTAL
Sensory- impairmts.	Motor disabils.	Young age	"Bad brain"	Sickness		
LA	4	8	0	0	0	12
EL	0	2	1	0	0	3
SH	0	2	0	3	0	5
SA	5	0	2	0	0	7
WA	0	0	1	0	1	2
KE	1	0	0	0	0	1
JO	4	2	0	3	3	12
CL	7	9	0	2	1	19
TD	1	0	0	0	1	2
TOTAL	22	23	4	8	6	63
<u>Third interviews</u>						TOTAL
Sensory- impairmts.	Motor disabils.	Young age	"Bad brain"	Sickness		
LA	5	3	1	0	0	9
EL	2	6	4	0	0	12
SH	0	0	0	4	0	4
SA	6	1	0	0	0	7
WA	0	0	1	0	1	4
KE	4	0	0	0	0	4
JO	2	1	0	0	1	4
CL	2	7	0	0	0	9
TD	7	2	0	0	0	9
TOTAL	28	20	6	4	2	60

#### 6.3.4.1 Sensory impairments

Sensory impairments were frequently referred to in descriptions of, and explanations for, the behaviour of children with SLD. Table 4 shows that six children in second, and seven children in third, interviews referred to the children with SLD as having sensory impairments.

There was no close parallel between the sensory impairments named by NH children and the incidence of corresponding characteristics among the Special School children. For example, all the children with SLD had speech difficulties but these were identified by only two children. Hearing aids were worn by one child with SLD but difficulty in hearing was given as a general descriptor of children with SLD by seven NH children. Similarly, the type of physical explanation for SLD used by NH children did not reflect characteristics of SLD children with whom they had been paired during integration sessions. This illustrates the salience of certain concrete cues in describing, and explaining the behaviour of children with SLD. The same cues were used to explain misbehaviour among the children with SLD; for example, naughtiness was thought to be due to not hearing instructions:

- LA - I don't like it (when they colour in badly) because they spoil the picture and when they did it the first time they came, they put the bead in the paint and Miss A. told them not to.
- AL - And did they put it in after that?
- LA - Yes.
- AL - Why do you think they still put the bead in the paint?
- LA - Because some of them can't hear properly and they didn't hear what she said".

Similarly, one child attributed SLD children's difficulties in reading and writing to hypothesised visual impairments: SLD children could not read books because they couldn't see the pages properly. In the same way TD attributed poor physical skills to visual difficulties:

- AL What do you think they're (SLD children) not very good at
- TD Not very good at running races (.) or if they went to do a handstand (.) or something like that (.) or on jumping (.) they only go (.) about like that  
[gestures- hands held approximately 30 cm. apart]
- AL They wouldn't be very good on the long

Jump (.) Why do you think they wouldn't  
be very good on the long jump  
CL Because they weren't able to see properly  
[Third interview]

Two children who, in the third interview, described the children with SLD as "handicapped" or "disabled" went on to say that this meant that they were blind or deaf. Both of these children described the children with SLD as being clever. This could be interpreted as reflecting an adherence to relatively familiar and/or understood types of impairment, which took precedence over disabilities for which the children had no linguistic label.

However it may be that for some children the familiar sensory impairment label was used to encompass SLD; that is, when a child with SLD was described as "blind" the NM child meant by this both visual and intellectual impairment. One child clearly and consistently linked sensory impairment with being not very clever and having to do easy work in school.

#### 6.3.4.2 Motor disabilities

Five children in second interviews and six children in third interviews explained SLD children's difficulties with reference to hypothesised motor disabilities. Many of the children with SLD had

poor fine motor control and several NH children referred to this, for example:

AL Why do you think they [SLD children] find those things difficult

CL Because on eating they have to (.) their hands wobble a bit and (.) if they are picking up a glass their hands wobble

[Second interviews]

AL Why do you think they [SLD children] aren't very good at writing

LA Because if their hands don't work properly it sort of goes down

[Second interviews]

LA referred again to SLD children's hands in third interviews:

LA They try to work hard but they might not be able to

AL Why wouldn't they be able to

LA ...They might have shaking hands and they do their work all wrong

None of the children with SLD had gross motor difficulties. However several NH children referred to SLD children as having gross motor difficulties and

"falling down", for example:

AL What do they find hard

CL Staying up (.) staying up and  
not falling down

[Third interview]

AL What made them [SLD children] the way  
they are

EL They could have fell or something ...  
Like S (.) she can't walk that good (.)  
like when her mum was making the tea  
she could have tipped the pot over and  
the mum could have scalded her

[Third interview]

These children seemed to exaggerate physical difficulties of children with SLD. This was also illustrated by their references to SLD children needing wheelchairs (in the Special School and/or later in life).

Sensory or motor disabilities were often linked with the SLD children's need for help. In both the shorter and longer term about half of the NH children (four and five in second and third interviews, respectively) said that the children with SLD needed "a lot of help". The remaining children said that the children with SLD needed only a little help or help with only some activities (usually citing cognitive tasks).

For the majority of the children their views about the amount of help needed by children with SLD was consistent across the second and third interviews. The integration experiences did not lead to any general change of views about the children with SLD as either helpless or independent.

#### 6.3.4.3 Young age

The tendency for the NH children to label the children with SLD as chronologically younger than was actually the case, noted in the second interviews (Lewis and Lewis, 1987) recurred after extended contact with the children in the structured integration settings. Estimated ages ranged from three to six years (mode five years) in second interviews and four to seven years (mode five years) in third interviews. The ages of children with SLD estimated by individual NH children varied very little between second and third interviews. It was not the case, as might have been predicted, that experience of children with SLD led to a marked, downwards revision of estimated ages.

Three NH children, in second or third interviews, spontaneously referred to SLD children as being young (i.e. younger than the NH children).

#### 6.3.4.4 "Bad brains"

In second interviews three children described SLD classmates as having "something wrong with their brains", one child stated that the class teacher had told them this. One NH child (SH) elaborated on the idea that the SLD children had "bad brains" and explained causes of SLD as brain dysfunction ("Their brains don't send the right message"). She was the only child who sustained, between second and third interviews, an explanation of SLD as due to "bad brains". She articulated, although in a rather crude form, the nature of mental handicap: "Her brain tells her ears to do the wrong thing... Yes, and their brain tells them the wrong thing, because it forgets the message". This child was more explicit about the intellectual impairments of children with SLD than were other NH children.

By contrast, other NH children tended to emphasise what the children with SLD were able to do, rather than their lack of abilities. In some cases descriptions were over-positive compared with the actual attainments of the children with SLD. For example:

I've always worked with S (girl with SLD) since she's come here, now she's getting ever so good at, at... cos she can write, she can spell my name out now and she can say it properly...I had to learn her



first though... When we sing "We're going on a lion hunt" they're ever so good at singing it, I keep forgetting it so I look at S and she tells me... S can read books by herself, then easy ones with the big words [i.e. large size print] I mean little words [i.e. short words] like "This dog is going near the sea" (EL)

However S was not able to do any of these things and attainments by her in integrated sessions were below the levels described here by EL.

#### 6.3.4.5 Sickness

Four children in second interviews associated SLD with sickness or "being poorly" (see Table 4). This was mentioned by two children (once each) in third interviews. It may be that the children could not envisage long-term sickness for children. Several did describe adults who were very ill for a long time but, in other children, sickness seemed to be associated with short term illnesses such as coughs and colds. These NH children could not sustain the notion, that they had applied in the short term, of SLD as sickness.

These results show that, in general, children with SLD were well-liked by NH classmates and that this was sustained or increased with experience of children with SLD. Knowledge of SLD increased significantly and there was sustained or greater realism about children with SLD after substantial experience of those children although the integration project did not include specific teaching about SLD. However explanations of SLD to which reference was made, explicitly or implicitly, in interviews showed that NH children retained some misconceptions about SLD. Many of the NH children seemed to be equating SLD with sensory impairments or motor disabilities. Possible reasons for this will be examined in the following discussion of this study.

## 6.4 DISCUSSION

### 6.4.1 Discussion of findings

#### 6.4.1.1 Comparisons between attitudes towards classmates thought to have difficulties and attitudes towards children with SLD

The first aim of the present study was to compare attitudes towards classmates thought to have difficulties with attitudes held towards children with SLD. The results from the present study support Jenkinson's (1983) view that children who have an obvious cause for their difficulties will be received, by classmates, more sympathetically than children for whom there is no obvious cause of difficulty. The attitude interviews showed that affective attitudes were positive towards children with SLD and those children's difficulties were attributed to various physical causes. By contrast, classmates with difficulties (particularly "not very clever" children) were viewed less positively and there was greater variation in the hypothesised causes of their difficulties (Lewis and Lewis, 1988).

#### 6.4.1.2 Affective attitudes towards children with SLD

The second aim in the study reported here was to investigate changes in attitudes towards children with SLD. Willingness to interact with individual children with SLD in school-based situations remained high after contact with those children. However willingness to take those children home decreased slightly. Interestingly, this approach is likely to have produced a more positive picture of attitudes towards SLD children than would have been obtained using nomination sociometric ratings (Asher and Taylor, 1981). Significantly more positive affective attitudes after experiences with SLD children, were also indicated by ratings of SLD children on six pairs of traits, with those children being strongly seen as "fun" and "brave". These findings support the results from Study 1 which, using an impressionistic measure, found that NH children were generally positive in their manner towards SLD partners.

These findings contrast with those of some researchers (for example, Horne, 1985) who have suggested that "familiarity breeds contempt" and that as children with special needs become more fully integrated, NH children's tolerance towards them diminishes. In the study reported here, the children with SLD were integrated with the NH children for only a small part of the school fortnight. Consequently it is likely that the children with SLD were never seen as "real" classmates. It is possible that full-time integration would have produced different results

in terms of attitude change.

The positive affective attitudes found in this study are consistent with the work of researchers investigating attitudes of slightly older NH children towards classmates with SLD. Groups of eight to eleven year olds (Gottlieb and Switzky, 1981), eight to twelve year olds (Towfiguey-Mooshyar and Zingle, 1984) and nine to ten year olds, (Maras and Forrester, reported in Forrester, 1988) have been found to express positive affective attitudes towards children with SLD. The present study provides evidence that children as young as six and seven years old express positive affective attitudes towards children with SLD with whom they have had contact.

The high rating of SLD children on "fun", noted in the present study, has been found also by Stainback and Stainback (1982) concerning 10 and 11 year olds', and by Voeltz and Brennan (1984) investigating 7-16 year olds', attitudes to children with SLD. In both these studies, children with SLD were in special classes in a mainstream school; NH-SLD contact took place mainly during lunch and/or morning breaks. Hazzard (1983) found, as in the present study, that NH children were more accepting of "handicapped" children in school than in home or personal friendship situations.

No statistically significant differences were found between boys and girls in either second or third interviews in affective attitudes held towards SLD classmates. This relates to Horne's (1985) comment that although most research has demonstrated that girls are

more accepting of the handicapped than are boys, it is not clear at what age these sex differences begin to emerge. The results reported from the present study indicate that sex differences in attitudes towards SLD classmates do not emerge until after age seven.

Both work by attitude theorists into attitude change, and research on changes in attitudes of older NH children towards children with SLD; indicate features of the integration project likely to have promoted positive affective attitudes. Attitude theorists have emphasised the roles of structure, equality between groups, institutional support and inter-group contact in promoting positive attitudes (see Chapter 2). Similarly researchers have found that the use of highly structured activities in the integration setting, shared cooperative tasks, forced contact between NH and SLD children, and the avoidance of labelling of the SLD group, as well as partial rather than full-time integration, are significant factors in promoting positive attitudes towards SLD children (discussed in Chapter 2). Effects of integration in terms of the promotion of positive attitudes have been found to be greater with eight-nine year old, than with ten-twelve year old, NH children (Tomfiguey-Hooshyar and Zingle, 1984).

Many of these features, found to be associated with the promotion of positive attitudes, occurred in the present study: NH and SLD children worked in pairs

on a common task which was highly structured and aimed to give complementary roles to each child, there was strong institutional support for integration, it took place on a part-time basis and involved young NH children. Thus the nature of the integration project was likely to have influenced and sustained positive affective attitudes.

#### 6.4.1.3 Knowledge of SLD

Knowledge of children with SLD, assessed by hypothesised school and adult lives of SLD children, was significantly higher in third than in second interviews. However, references to physical causes of SLD showed that many children focused on irrelevant attributes (for example, the wearing of spectacles) and made incorrect assumptions based on these irrelevant cues (for example, that SLD children's inabilities to write were due to visual difficulties). Thus, although knowledge of SLD increased, NH children still held misconceptions about SLD after integration experiences over one school year.

The increase in knowledge of SLD may have been only a reflection of increasing maturity and unrelated to experiences with SLD children. In a cross-sectional study of eight to eleven year olds Hazzard (1983) found that knowledge of handicap increased with age, and this was unrelated to previous experience of the handicapped.

However there are several important differences

between the study reported here and Hazzard's (1983) work. Hazzard assessed knowledge of the handicapped in general and did not relate it to a specific group. Her attitude scale included items relating to a variety of handicaps (including, for example, blindness, deafness and physical disablement, as well as general items referring to "handicapped people" or "retarded kids"). Hazzard's approach provided a more general measure of knowledge of handicap than the structured interview schedule, used in the present study, which was aimed at assessing knowledge of SLD specifically. It is possible that whereas a general knowledge of handicap increases with age (as a result of general cognitive development and acquiring information about handicaps through, for example, schooling and the media) the highly specific knowledge of SLD tapped in interviews in the study reported here is much less likely to be acquired incidentally. Unlike the present study, Hazzard's (1983) work made no attempt to link contact with specific handicapped groups with knowledge of that handicap and this is reflected in the general nature of her knowledge of handicap items.

Possible reasons for the confusion about causes of SLD will be discussed in the light of (i) Katz' (1982) developmental model of attitude change, including young children's abilities to coordinate conflicting cues; and (ii) work on the salience of physical cues for young children.



6.4.1.4 Explanations for SLD in the light of Katz' (1982) model of attitude development

Katz' (1982) model of the development of racial attitudes (see 2.2) may be applied to findings from the present study in relation to attitudes towards children with SLD. This enables the strategies being used to explain SLD to be put into a developmental perspective.

All NH children in the present study had passed Katz' first and second stages in the development of attitudes. They were all able to make crude judgements, for example, that the children with SLD had some physical, internal cause for their disabilities. Internal causes varied from unspecified sickness or injury at birth and brain damage, to a lack of "the right" food.

Stage 3 (conceptual differentiation; Katz, 1984) in which group boundaries are ratified could not be deduced from the results of attitude interviews as no questions focused on this specifically. However it was clear that children with SLD were thought of very differently from classmates with difficulties. It was not the case that children with SLD and "not very clever" classmates were regarded as being at different points along a low ability continuum.

Many of the NH children were unsure about the irrevocability of certain cues (Katz' stage 4); specifically, whether or not SLD were a characteristic, like race, which is irrevocable or whether, like age, it will change. Both stances were represented in the group by different children and by the same child on different occasions. EL, for example, overestimated the capabilities of children with SLD both in the integrated classroom (see, for example, extract given in 6.3.4.4) and in the near future. She described children with SLD as being able to read books about computers when they were a little older. This seemed to suggest that she saw the difficulties of SLD children as transitory, consistent with SLD children being "normal" but young. However EL's projections about the future for SLD children were confused and not consistent with the view that SLD would be outgrown.

If they don't try to be good then they will [in the future] be like they are but if they try really hard they'll get different..(when they grow up] they might have changed (they'll) get a job.. or if they don't change they might not be able to grow up so much.. it could be that when they try they might change a bit different.. they might get jobs like cleaning or baby-sitting ...

EL was beginning to work out relevant cues concerning SLD, and to respond to them. One might anticipate that EL's emphasis on children with SLD as being of a young age would be reflected in her speech to SLD partners. The type of speech addressed to SLD partners was the focus of Study 3 (reported in Chapter 7) and this point will be considered again there.

EL had not deduced that (in SH's terms) "bad brains" were the crucial and irrevocable cue to SLD. The six to seven year age range is the time by which the irrevocability of cues concerning gender is recognised (Slaby and Frey, 1975) and racial constancy is beginning to be acknowledged (Kutner, 1958). This suggests that the findings from this study in which one child (SH) had understood the crucial cues concerning SLD and other children were moving towards this position (for example, by rejecting sickness explanations of SLD) are consistent with studies concerning the development of attitudes related to characteristics other than SLD.

A few of the children had begun to consolidate group concepts of peers with SLD and to inter-relate conflicting cues (Katz' (1982) stage 5). The ability to coordinate separate judgements inferentially has been discussed by Bryant (1974) in relation to perceptual tasks, and Rogers (1978) concerning social cognition. It is important in relation to the development of knowledge about SLD as a realistic understanding requires the child to coordinate several sets of conflicting cues

about children with SLD. Size (normal for chronological age) with ability (relatively limited) may be the most obvious set of conflicting cues. If NH children ignore the ability cues then they will judge children with SLD to be of (in this research) a similar age to themselves; however if size cues are ignored then the children with SLD will be judged to be developmentally very young (their linguistic and cognitive developmental ages were reported to be around three years).

Another set of conflicting cues concerning children with SLD and related to findings from developmental work concerns young children's equating of effort with ability (Durkin, 1986). Understanding of SLD required recognition that children with SLD might work hard but were not, in conventional or school-oriented terms, "clever". The NH six and seven year olds in this research did not make explicit causal links between these two (i.e. children with SLD are clever because they work hard, or vice versa) but they did refer to the two characteristics as co-existing in the children with SLD, for example:

They [SLD children] work hard ... they  
have a good time... they like working...  
they're clever... like with painting

(KE, Third interviews)

Similarly TO:

They're [SLD children] really good at things (.) once we went to their school (.) we (.) we had to make a picture (.) and I worked with T again (.) and he's really good at making pictures (.) so (.) we had a nice day out with them ... they really work hard

(Third interviews.)

However when TO was asked why he thought the children with SLD "worked hard" he answered tautologically: "Cos they work hard". The opposite view to that of KE and TO was held by WA who stated:

They [SLD children] don't work hard..  
they don't do much writing and that..  
they're not clever."

(Third interviews.)

All three of these children made statements which were consistent with a view that hard work=high ability or conversely that little work=little ability. They were representative of the NH children as few of the group were able to cross high effort/cleverness with low cleverness/effort respectively. This is consistent with Rogers (1978) conclusion that it is not until ages seven

to eight that children can accept that desirable and undesirable traits may coexist in one individual.

One NH child's reaction to misbehaviours by children with SLD illustrated the confusion caused by a failure to coordinate conflicting cues about SLD. This NH child was unable to accept the teachers' apparent failure to strongly reprimand children with SLD for recurrent misbehaviour, when NH children were admonished for similar behaviour. This NH child, unlike SA who described attainments of the children with SLD as being "good for them", could not accept the apparent dual standards of both work and behaviour operating during the integration sessions. Confusion and internal contradictions about the probable future for the children with SLD and the nature of their school reflected a lack of consolidated group concepts about SLD for the majority of NH children.

Some children (for example, SA) used "young age" plus sensory or motor difficulties as the explanation for the behaviour of children with SLD. This accounted for a large part of the behaviour of those children, it explained for example why the children with SLD misbehaved (they didn't hear instructions), why teachers didn't always reprimand the children (the children with SLD wouldn't hear), poor drawing and craft skills (they couldn't see the paper and were also too young to have learned some skills), the nature of the SLD school (special equipment, reading books with large print), the

use of signing (because they couldn't hear) and probable future for children with SLD (they'll need some help). Sensory or motor explanations for SLD are likely to remain intact for these NH children unless they meet children with sensory and/or motor difficulties only, and this will lead to the perceptual elaboration described by Katz (1982) as the sixth stage in attitude development.

One of the possible ways to coordinate conflicting sets of cues was to develop an explanation for the behaviour of children with SLD based on some superordinate factor (for example, SH's reference to "bad brains") which allowed for both normal physical size for chronological age and very low ability for chronological age. This reflects Katz' (1982) sixth and seventh stages of attitude development in which differences between groups are exaggerated and "concept attitudes" become "(racial) attitudes". In second interviews SH tentatively linked working hard with not being clever: "They [SLD children] work their best...they're quite clever". However in third interviews, after further contact with SLD children, she expressed more certain views that the children with SLD worked hard (but) were not clever.

SH had reached stages six to seven in Katz' structure and used a model of "SLD" as meaning, having "bad brains". Her responses were consistent in both second and third interviews with this orientation and

included statements that children with SLD were "about 6 (years old)" (a realistic estimate), "can't do things well" and are "not very clever" although they "work hard" because "they want to get better at things so they can be like us". She adhered strongly to explanations for the behaviour of children with SLD as related to brain malfunction and linked this with their naughtiness:

Well when we first met them they were just like normal (.) they acted just like normal (.) (Now) they're not so good (.) The first day we had them they did as they were told (but later) they weren't very good (.) because (.) they hadn't got the brain like other people ...

Sometimes they don't do as you tell them (.) because their brain tells their ears the wrong thing (.) their brain tells them what to do (.) the wrong thing (.) because it forgets the message ...

(That's) because when they were born (.) they were born the wrong way round (.) if they were born the right way round they'd be just like us ...



They need lots of help ... they'll always be like that ... (when they grow up) they'll be a little bit the same but they'll know a little bit more ... they'll have somebody to look after them at their home ... on Saturdays and Sundays they could ask the person what's helping them if they could take them shopping (.) or to go down the canal and have a walk ... you've got to have more patience [with SLD children than with NH classmates]

Detailed extracts from this child's account in the third interview have been given because SH was the only NH child to have such a coherent picture of the children with SLD and which she maintained despite probing questions and attempts to find inconsistencies in her responses. She was also the only child to consistently base her model of SLD on "bad brains". As with EL, one might anticipate that attitudes would be reflected in speech; that is, that a strongly held view that children with SLD had "bad brains" would be reflected in the ways in which SH addressed children with SLD. This question is considered in Study 3 (Chapter 7).

Thus, most of the NH children had not evolved accurate or coherent explanations for SLD. The integration experiences led to greater realism about SLD

children and some adjustment to explanations held of SLD, but in general these were too unsophisticated to show a development between second and third interviews.

If integrated experiences continue it is likely that these NH children will have to readjust their explanations of SLD as notions about the permanence of certain cues are refined. Through this they are likely to realise that difficulties for the children with SLD neither stem solely from sensory or motor disabilities nor are merely a reflection of SLD children being too young to have yet learned certain skills. The many areas of development in which the children with SLD will not be developing as normal will eventually force modifications of explanations of SLD used by most children in this study. Some of the implications of this have been considered elsewhere (Lewis and Lewis, 1988).

The emphasis on physical descriptors and hypothesised physical causes of difficulties for children with SLD prompts the question- was this consistent with other work on how young children describe other people? This question will be explored in the following section.

#### 6.4.1.5 Salience of physical cues in descriptions of SLD given by young NH children

The previous section has examined how knowledge of SLD expressed by young children in the present study, fitted into Katz' (1982) model of attitude development, and in particular the extent to which NH children were able to coordinate conflicting cues. For most NH children their explanations of SLD did not satisfactorily coordinate different cues and there were contradictions in explanations for the behaviour of children with SLD. However, throughout interviews NH children made frequent reference to various physical explanations for the behaviour of children with SLD.

All the NH children in the present study cited physical causes for SLD. This focus on internal causes of difficulties has parallels with findings from Maas et al.'s (1978) investigations into 7-11 year olds "conceptions of disordered behaviour" in which the younger children were found to attribute behavioural difficulties to within-child factors.

The most frequently referred to physical explanations for SLD, although not coherently developed, were sensory and/or motor difficulties. There are several possible reasons for the prominence of these

explanations. These are first, the salience of overt physical characteristics for NH children in the six and seven years age group and second, the use of known verbal labels to assimilate the unfamiliar. Each of these explanations for the prominence of sensory-motor explanations will be discussed.

Physical indicators of sensory or motor difficulties appear to have been very powerful for NH children, illustrated by reference to them in attitude interviews. Several of the children with SLD wore hearing aids/ spectacles and reference to these might be predicted from the work on person perception (for example, Livesley and Bromley, 1973; Rogers, 1978; Durkin, 1986). The salience of such physical characteristics for children age six and seven shows why explanations for SLD might have "hooked on" to these cues.

When they were interviewed the NH children had to articulate, probably for the first time, how sensory/ motor cues linked with explanations for the behaviour of children with SLD. The importance of relatively minor events which supported these explanations then became apparent as these events were drawn on to justify the explanation. The use of Makaton signs, for example, introduced by adults in the first session but used infrequently thereafter, was explicitly given by several NH children in third interviews to justify a view of children with SLD as having hearing impairments.

The second explanation for the use of sensory/motor characteristics when describing children with SLD concerns the use of sensory/ motor terms to encompass SLD. It may have been that because terms like "deaf" and "blind" were known and understood, accounts of SLD were fitted into those relatively familiar terms and their meanings took precedence over characteristics that did not "fit". This is the type of mechanism described by Vygotsky (1962). He noted that young children found it difficult to separate the verbal label from its attributes.

A similar process has been found in the use of a verbal label and application of the label to others by four and five year olds (Felleman et al, 1983). This work concerned labels for emotions. Felleman et al. found that "neutral" facial expressions tended to be misidentified as sadness. There may be parallels with SLD; that is, these six and seven year olds may have misidentified SLD as, for example, sensory impairments because the NH children had no verbal label for SLD whereas they did have verbal labels for sensory impairments.

This feature, which in the short term may have helped these children to adjust to and work with the children with SLD may, in the longer term, lead to misconceptions about both children with sensory or motor disabilities and children with SLD. Bruner and Haste (1987) emphasise the need for children to understand

both the "sense" and "reference" of labels, and that an understanding of the "sense" "depends upon far more than a knowledge of the lexicon." (p.16). None of the NH children in the study reported here had acquired and understood both "sense" and "reference" for terms applied to SLD children, although SH was closer to this than were the other children.

This discussion has shown that the main findings from the present study, concerning more positive attitudes towards children with SLD than to classmates with difficulties, increasingly positive affective attitudes towards children with SLD, and greater realism about SLD over time, are consistent with work of other researchers. The study presented here differs from other reported work in the comparatively young age of the subjects, the focus on attitudes to SLD specifically; and the control of contact with the handicapped group, as all subjects were involved in one to one contact with SLD children. The types of explanations for SLD given by young NH children have been discussed. It has been shown that the explanations given were consistent with developmental research concerning the development of attitudes, and descriptors of others used by young children. The following section of this chapter will consider the limitations of the present study.

#### 6.4.2 Limitations of the study

The setting for the data collection was a specific school setting and therefore the generalisability of the findings is limited. Attitudes may have been due to situation-specific factors, such as the teachers' attitudes to the integration project.

The small number of subjects also means that further studies are needed before conclusions can be applied more widely. The small number of both classmates with difficulties and SLD children, about whom interviews focused, may have distorted results. Attitudinal responses may have been reflecting the nature of individual classmates or children with SLD, for example, their friendly or aggressive personalities, rather than the nature of their difficulties. No attempt was made to measure personality variables (of either NH children or classmates or SLD children) in this study. No systematic distinctions have been made between types of children with SLD although the term "SLD" encompasses a variety of aetiologies. Larger samples would be needed to allow the partialling out of factors such as personality and types of SLD.

Interview techniques may be subject to bias. For example, in the present study positive affective attitudes expressed in semi-structured interviews may

have reflected the giving of "desired" responses. However, several features of the results indicate that this was probably not the case. The positive affective attitudes towards children with SLD did not extend to NH classmates with difficulties, in particular to classmates thought to be "not very clever". If NH children were giving "desired" responses it might be anticipated that this would apply also to questions about classmates with difficulties.

In addition, the differentiation in intra-child responses about affective attitudes towards children with SLD suggests that NH children were not trying to give only "desired" responses. For example, in third interviews NH children expressed an increased disinclination to take children with SLD to their homes, whereas the NH children were likely to have regarded wanting to take children with SLD home, to be the "desired" response.

The validity of the second interview schedule is supported by its successful use by other researchers (Maras and Forrester, reported in Forrester, 1988). Maras and Forrester used the schedule to study NH nine and ten year olds' attitudes towards children with SLD. Preliminary analyses indicate that the results, showing positive affective attitudes towards children with SLD, and similar descriptors and causes to those found in this study, support the findings from the present study.

Interest in the study reported here was not on the



effects of contact with SLD children on attitudes held towards those children. Consequently the study did not include control groups of NH children who had different degrees of contact with children with SLD. Changes in attitudes found in the present study may be a reflection of maturational changes, or events external to the integration project, rather than contact with children with SLD. As interest was in the nature of attitudes towards children with SLD and comparisons with attitudes towards classmates with difficulties, no attempt was made to control for contact with SLD children.

The use of semi-structured interviews provided a means of exploring affective attitudes and knowledge of SLD held by young NH children. In spite of the difficulties of obtaining reliable evidence from young children through interviews (considered earlier, 6.2.2), the schedules used in this research provided evidence of explanations of SLD that have not been investigated elsewhere. The results of the semi-structured interviews with these six and seven year olds suggest that it was an appropriate technique to use and supports Horne's (1985) call for greater use of interview techniques in probing attitudes held towards the handicapped.

#### 6.4.3 Directions for the following study

Hazzard (1983) has noted that several studies on attitudes towards the handicapped have produced equivocal results because affective attitudes and knowledge of the handicapped have been combined. In the research reported here, the increased realism about school and adult lives of children with SLD, and the increase in positive affective attitudes; contrasted with a lack of progress towards accurate explanations for SLD, support Hazzard's point.

Explanations for SLD may have operated as an independent intervening factor to limit or enhance interaction. For example, a belief that SLD were a sickness might have discouraged interaction with SLD children even though SLD children were well-liked. Similarly, if children with SLD were thought to be deaf then this would be likely to deter attempts at verbal interaction.

An examination of NH children, whose attitudes to children with SLD were known, combined with a fine-grained analysis of those NH children's discourse with SLD partners would provide further detail about NH-SLD interaction, and might show how attitudes and interaction were inter-related. With these points in mind, and building on the increase in both NH-SLD

interaction over a year of integration sessions (found in Study 1) and the positive affective attitudes towards classmates with SLD (found in both Studies 1 and 2). Study 3 focused on NH-SLD discourse of the NH children involved in Study 2.

## CHAPTER 7

STUDY 3: DISCOURSE BETWEEN NON-HANDICAPPED SIX AND  
SEVEN YEAR OLDS AND PEERS WITH  
SEVERE LEARNING DIFFICULTIES

## 7.1 INTRODUCTION

Study 1 showed that NH-SLD interaction occurred in 24.3% of observation points and approximately half of this interaction was verbal. The focus of interaction was predominantly on the joint task, reflecting the roles of NH children as tutors to SLD partners. The results from Study 2 indicate that while NH children are likely to persevere at communicating with SLD partners, discourse strategies may be inappropriate for the listener, reflecting misconceptions about SLD.

The present study set out to investigate the nature of talk between NH children and peers with SLD. One starting point is to ask: is NH children's talk to SLD children characterised by features that are, in the literature (reviewed in Chapter 3), commonly associated

with talk by older or more able children to younger or less able children? If NH children's talk to SLD partners is characterised by "young listener" features then it suggests that the NH children are able to distinguish and respond to the more relevant, but less apparent, developmental cues in SLD children from the overt, but misleading, physical cues. The salience of the latter were demonstrated in Study 2 (Chapter 6) in which physical characteristics were found to feature prominently in both descriptions of SLD children and hypothesised causes of SLD.

NH children's knowledge of SLD (explored in Study 2) is likely to have an effect on both how quickly attempts at communication are abandoned, and the ways in which NH children address SLD partners. For example, if SLD children are thought to be deaf then it may be appropriate (for the NH speaker) to repeat utterances frequently.

Comparisons between the characteristics of NH-SLD talk and NH children's talk to younger NH children may show whether or not SLD partners are being treated linguistically like younger NH children. Listeners with SLD (however SLD is interpreted) may generate a different style of talk by NH children from that directed at other NH children.

The characteristics of NH children's talk to SLD partners may be considered in terms of intra-SLD group differences. The diverse aetiology of SLD

indicates that a uniform style of address to SLD partners is likely to be inappropriate for some of the children with SLD. The necessary fine-tuned adjustment requires greater skills of decentring than is evident in a, broadly appropriate, speaking to children with SLD as if they are very young. However work on the development of communicative competence in the early school years (for example, Robinson and Whittaker, 1986) suggests limitations to the ability of six and seven year olds to engage in effective communication with partners who frequently fail to respond to messages (for example, SLD children). Utterance functions, use of repetitions and reformulations, and the sequences of repetitions and reformulations, within and across speech topics, may show adjustments to individual listeners.

Characteristics of NH-SLD talk may also be considered in terms of the context. If NH children are told, explicitly and/or implicitly, by adults that their roles are as tutors to SLD children then various tutoring features, such as, providing feedback to the listener would be appropriate.

## 7.2 METHOD

### 7.2.1 Subjects

Details of the three groups of children (NH six and seven year olds, children with SLD, and four and five year old NH children) involved in the study reported here, are given in Appendix 1, Table 27.

The 10 NH "target" children (five girls, five boys, mean age 6:5 range 6:1-6:10 in September, 1985) involved in Study 2 (see 6.2.1) were also involved in the present study. These NH children were paired with 10 children with SLD (five girls, five boys, mean age 6:1, range 4:8-8:2 in September, 1985). Seven of these children had Down's syndrome and the remaining three children had unknown causes of SLD. Eight of the children had been involved in the integration project between their special school and the mainstream school during the previous academic year (i.e. Study 1). Parents of the two children who had not been involved previously were supportive of the project and parents whose children had been involved in the integration project during the previous academic year were enthusiastic about its continuation. These 10 children formed the total lower school group in the special school therefore there was no selection of specific pupils for participation in the project.

One comparison session was held in which the 10 NH "target" children were paired with four and five year olds from the reception class in the mainstream school. The four and five year olds were all unrelated to target NH children but were known to them by sight. This comparison session is referred to as the "M5" session.

Seven adults were involved in teaching during the integration sessions at various times during the school year. Most of these adults, including the mainstream class teacher and her classroom auxiliary, had been involved in the integration project which took place the previous year.

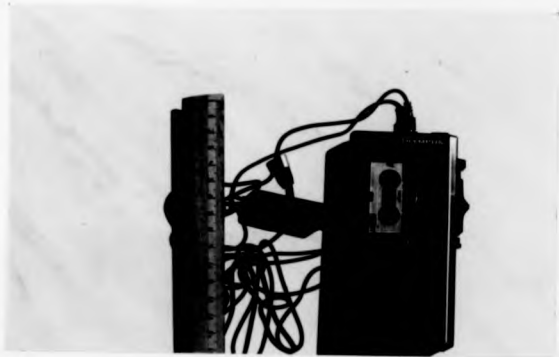


### 7.2.2 Materials

Focus was on the language used by the NH children to their SLD/MS partners. The method of recording talk had to be sufficiently sensitive to pick up all language between pairs of children but sufficiently focused to avoid picking up background noise. In addition any recording equipment had to be robust enough to withstand the normal classroom environment. However obtrusive equipment would have been likely to inhibit the children's speech. The recording equipment also had either to be available in the relevant university departments or sufficiently inexpensive to be purchased within normal budgets.

Traditional desk top recorders were available but would have recorded language from a large group of children, making identification of individual speakers difficult without specific observation notes. The use of only one classroom observer (AL) precluded the type of detailed notes which this would have required. Radio microphones were not available and would have been very expensive to set up for all 10 NH children involved at the start of the study reported here. Video recording equipment would have meant a reduction in the number of subjects concurrently recorded if it had been the only

Figure 7: Micro-recorder and microphone used  
to collect samples of discourse



means of collecting the language samples. However it might have been a useful adjunct to other methods although this would have restricted the observer's wider observations.

The use of individual micro-recorders, each with its own microphone, met most of the criteria summarised above. Micro-recorders (see Figure 7) were placed (prior to the session) in the pockets of specially designed jackets (shown in Figure 8) worn by each NH child. A microphone was attached to the lapel of the jacket and the cord concealed in piping around the edge of the garment.

There are some disadvantages in the use of micro-recorders in this context. First, children may accidentally switch the machines off, although the particular machines used in this study (Olympus Pearlorder T700) had a firm on/off switch. Second, if the microphone became partially detached from the recorder then no sound was picked up. Older machines of this type were too heavy or bulky to be worn conveniently by children moving around a classroom. This was not a difficulty with the machines used in this study which were small (129x61x22 mm) and weighed only 245g including batteries.

Figure 8: Jacket worn by non-handicapped children  
(micro-recorders contained in breast pocket)



The NH children wore the jackets described above, during two afternoon sessions prior to the commencement of the integration sessions. On these occasions wooden blocks of a similar size and weight to the micro-recorders, were placed in the pockets. The blocks were used to acquaint the children with the feel of the recorders and to diminish curiosity about the contents of the pockets.

The required number of micro-recorders was not available until the fourth integration session. Consequently in the earlier sessions language was not recorded for the total NH group. Children without recorders in those sessions wore dummy recorders (i.e. the blocks of wood).

### 7.2.3 Procedure

Data on talk by NH children to SLD/MS partners were collected in the naturalistic setting of the classroom during usual class activities. The naturalistic setting was chosen because the integration project was available and running. Data collected in this context were more generalisable than those collected in a laboratory setting. Many of the features present in settings established for research purposes only, for example, the unfamiliar (for the children) resources and environment, which limit the representativeness of data, did not apply in the present

study.

The language samples collected for analyses consisted of all recorded speech, spoken by, or addressed to, individual NH children during part (b) of the integration sessions (September 1985- July 1986). During this period each NH child was paired with a child with SLD and the children were instructed to work together on a specific cooperative task (see 4.3.2). Length of this period, during which discourse was recorded, varied between 15 and 40 minutes (details in Appendix 1, Table 28).

In addition to recordings made during the integration sessions, recordings were made of speech by the target NH children in a comparison setting. This comparison (MS) session was of the same format as sessions involving children with SLD but in the comparison session target children were paired with four and five year olds from the same mainstream school. In the comparison session the class teacher was the only adult present (apart from the observer -AL). Observation notes were made throughout each of the integration and MS sessions as described in Chapter 4. In addition, each NH child was observed in turn for 30 seconds. Notes made during these periods provided contextual information which was later added to transcriptions of discourse.

#### 7.2.4. Coding of discourse samples

Language collected in the integration and M5 sessions was coded to provide a detailed, systematic and comprehensive analysis of recorded discourse. There has been widespread debate about methods of coding discourse and this debate has focused on two approaches: discourse analysis and conversation analysis (Stubbs, 1983; Wells, 1985; Taylor and Cameron, 1987; Potter and Wetherall, 1987). Both of these approaches reflect ideas, developed by Austin (1962), concerning speech act theory. Discourse analysis reflects a psycho-linguistic orientation in which units of talk are classified, form part of a hierarchy of units constituting, for example, a lesson, and describe the whole of the linguistic interaction in which data was collected. A criticism of discourse analysis has been that the principle of attempting to classify units of talk into finite, "comprehensive" systems distorts the nature of discourse by "tidying it up".

By contrast, conversation analysis reflects a sociological orientation to the data and focusses on the ways in which participants coordinate verbal and non-verbal behaviours. Analyses are based on extracts from linguistic interactions. This has led to the criticism that conversation analysis is a partial and highly subjective interpretation of the data on the part of the researcher(s).

In the present study the former approach of discourse analysts was taken. The approach is justified in this study on the basis that little research has been carried out into the nature of NH-SLD discourse (discussed in 3.3). Consequently, few assumptions could be made about what the important features of NH-SLD discourse might turn out to be. Each of the classifications of utterance functions, exchanges and types of reformulation aimed to be comprehensive so that an overall picture of NH-SLD discourse was obtained. No single existing system of classifications of units of talk was found to be appropriate for this study. However, the classifications devised included elements (for example, from Dore's (1986) classification of utterance functions and McTear's (1985) work on exchanges) which have been validated in other research. The prior delimitation of particular classifications was supplemented with the identification and examination of specific features which, retrospectively, reflected different tutoring strategies and types of dominance of NH-SLD interaction by NH children.

The process for coding each language sample in the present study is summarised below (example of transcription sheet and a sample transcript are given in Appendix 2).

1. The first one minute of the transcript was excluded as this immediately followed the switching on of the



recorder. Adults (either a mainstream/special school adult responding to a child's query and/or the researcher (AL) who switched on each child's recorder) were often then in close proximity to the target child. The initial segment of talk was thought to be possibly unrepresentative of NM-SLD/MS discourse because of the proximity of adults at that point.

2. Utterances were delimited by a pause and/or change of tone as in the definitions of utterance reviewed below. Tape recordings and observation notes were scrutinised to clarify decisions about utterance boundaries if these were unclear.

Utterance is usually taken to mean a group of words by one speaker bounded by pauses and/or changes of intonation (Garvey and BenDebba, 1974; Cross, 1977; Lougee et al., 1977; Woollett, 1986). Garvey (1984) identifies speech by partner as possibly delimiting utterances. However if two speakers speak simultaneously, utterances may overlap. If a pause is used to demarcate utterances this raises the problem of how long the boundary pause should be, compared with small breaks between words within an utterance. Lougee et al. (1977) specify that the pause between utterances must be of at least one second duration. However, this is inflexible and difficult to apply reliably. This type of question is often decided, as

in this study, by subjective judgements of the coders/researchers. The validity of these judgements was assessed in this study by using a second coder to code utterance breaks on a sample of recordings (see 7.2.5 for reliability data).

3. Utterances were classified according to addressee: partner (SLD or MS), another SLD/MS child, adult, self, a NH child or "not clear". If in doubt utterances were classified as "not clear". [[]] were placed in the transcription around utterances which were not addressed to the SLD/MS partner.

The proportion of utterances addressed to adults (UTA) in the integration sessions was assessed by identifying the first 50 utterances spoken by the NH child (excluding the first one minute of recording). These 50 utterances (referred to as the UTA samples) were sub-divided according to addressee: adult, SLD child or other.

The UTA samples were not appropriate for analysing NH-SLD discourse as they provided a very limited sample of speech to SLD children for target children who addressed a large proportion of their utterances to adults.

4. Some sampling from the total transcripts was made to

provide an overview of the nature of NH-SLD discourse for statistical analyses. A number of sampling strategies might have been used to identify sub-samples. This could have been carried out using interval time sampling (e.g. discourse within every fourth quarter second band). Alternatively specific examples of certain types of discourse might have been located using the total discourse sample. The first of these loses a sense of continuity of discourse, a feature which it was anticipated would be important. The second approach is selective and as little is known about NH-SLD discourse a more comprehensive and systematic approach was sought. However counts of specific, possibly infrequent features, which reflected dominance in NH-SLD interaction, were seen as a useful adjunct to a more comprehensive system of coding and analysis.

Consequently all discourse involving the NH child and/or the SLD/MS partner encompassed by the first 50 utterances spoken to the SLD/MS partner after the one minute period noted above, were identified. The "50" utterances formed the samples for statistical analyses and are referred to as the "50U" samples. They provided a continuous sequence of discourse near to the start of paired activities. The use of 50 as a nominal figure generated a reasonable number of utterances in each sample as the basis for analyses. One of the disadvantages of this sub-sampling was that if total

session utterances substantially exceeded 50 the 50U sample over-emphasised early, contrasted with later, discourse in each session.

The extent to which discourse changed within sessions and therefore whether or not the 50U samples were representative of total discourse was assessed by examination of discourse from four NH children in one integration session (session 9). These four children made between 108 and 370 utterances in that session. These were divided into quartiles (by number of utterances) and within-child comparisons made of the proportions of utterances to SLD partners in four major discourse features in each quartile. This data is examined in Appendix 3.

In some cases total utterances, following the first minute, numbered fewer than 50. In these cases all these utterances (still excluding the first one minute of recording, see (1) above), were used as the 50U sample. All figures were converted to percentages for analyses.

#### WITHIN THESE 50 (or fewer) UTTERANCES:

5. Utterances which were used as "fillers" (for example "mmm") were deleted.
6. Use of name of the SLD/MS partner to obtain his/her

attention was circled.

#### CLASSIFICATION OF UTTERANCE FUNCTIONS:

##### 7 Requests.

Requests included personal or task-oriented requests, for example "Sit down", "Colour it red", "You can do the next one", "Let me put this on". In some cases these were very brief for example, "Down", "Yellow". In all cases the intention of the speaker was thought to be to clearly direct the listener to a particular course of action. Requests could take a variety of grammatical moods, for example, imperative ("Sit down") or interrogative ("Aren't you going to sit down", spoken in a firm/angry tone). This decision reflected acknowledgement of the point made by Olsen (1980) and McTear (1985) concerning the lack of one to one correspondence between utterance function and grammatical mood.

##### 8 Prohibitions.

A specific form of request, that is a request to stop doing something, usually conveyed with force, for example, "Don't do that", "Stop it". These were task oriented, for example, "Don't colour that" or personal, for example, "Don't be naughty".

#### 9. Prompts.

Prompting partner towards a particular course, for example, "Let's go round", "You could wipe it off". These were less strong than the 'requests' category and included interrogative directives, for example, "Are you going to cut it there" which did not appear to be intended as questions but were used as prompts or suggestions for action. Observation notes were used as cues in cases where this was unclear. Statements about the NH child's future actions, for example, "I'll do it for you" were included under prompts as they seemed to have been used as a prompt to the SLD/MS partner about (for example) handing the task to the NH child.

#### 10a. Monitors.

Commenting on the task/situation eg "It's going round", "That's a square". This category included giving information, labelling, describing and reporting on the situation. Emphasis was on the present or immediate past. It included monitoring of the NH child's actions if these were concurrent with the utterance, for example "I'm doing it red". Display questions such as "It's red isn't it" also came into the monitoring category.

#### 10b. Evaluatives.

A specific form of monitors, making personal judgements of worth, for example, "That's nice", "Good girl!", "You're very naughty".

## 11. Questions.

Questioning (as classified by Dore, 1986) which involved the listener making a choice or answering yes/no, for example, "Shall we do green or blue?", "Are you doing a circle?", "Do you want to wash your hands?"; asking "wh" questions, for example "Which way shall we go?"; or process questions which seek explanations or extended descriptions, for example "Why has the paint gone brown?". A distinction was made between closed questions (yes/no, single answer, either/or choice questions) and open questions with a wide range of possible responses.

## 12. Explains.

Explaining a point or giving a reason usually but not necessarily about the task, for example, "We've got to do pink because . . ." or making reference to classroom rules, for example, "Not two, we're only allowed one bit of paper".

## 13. Affirmatives.

Agreeing with or acknowledging partner, for example, "OK", "Yes".

## 14. Self-maintains.

Defending self, for example, "I want that", "That's mine".

## 15. Attentionals.

Single words used to attract the attention of the SLD/MS partner, for example, "hey" or the partner's name used in this way.

## 16. Unclassified.

Nonsense/ repetitive speech or unintelligible utterances, for example "sing-song" refrains like "bingy-bingy- boo- doo".

Generally each utterance was given only one functional coding, however in some instances it was clearly appropriate to give one utterance more than one type of functional coding. For example, "It's got a tongue" (to refer to a cue by which children would recognise their picture) was coded as monitors and explains. Utterances which were unfinished (for example, "Well I..") were not coded unless the function was unambiguously clear.

The form of the discourse was examined by focusing on the number and types of repetitions and reformulations of utterances. Single utterances were potentially neither, or, one of these; but not both. Repetitions and reformulations were regarded as possible indicators of explanations of SLD held by the speaker, for example, hypothesised deafness of SLD children was possibly linked with use of repetitions rather than reformulations. Reformulations may also have indicated



the extent to which the speaker was able to decentre to the listener's perspective, for example a tendency to retain deictic terms in reformulations might have indicated a failure to understand that the listener was confused about to what (e.g.) "that" was referring.

#### 17. Repetitions.

An utterance only counted as a repetition if it was an exact repetition of words in the utterance and within the speech topic. Re-starts within an utterance, for example, "Did you did you go back?" were not classified as repetition. A repetition of an utterance accompanied on the second speaking by a gesture was coded as a repetition (not reformulation) as non-verbal behaviours were not coded.

#### 18. Reformulations.

Reformulations were utterances, within one speech topic, which carried the same message as a preceding utterance but in which words/clauses were altered syntactically and/ or lexically, or dropped. For example:

"Colour it in red"

> "Colour it in",

"Don't go there"

> "Don't go to that table"

> "Don't go to that desk".

19. Reformulations and repetitions that occurred within one speech topic were bracketed to highlight this. This was important as the order in which reformulations and repetitions occurred within speech topics may have shown a regular pattern, for example, a tendency to successively reformulate utterances within a speech topic may have indicated considerable persistence in trying to communicate with the partner.
20. Reformulations were sub-divided according to the type of reformulation used. Reformulations may have reflected both, explanations of SLD which were being applied, and the speaker's ability to decentre. One utterance could be coded as containing more than one type of reformulation (for example, adding an attentional plus simplifying the utterance).

Types of reformulation were:

A. Changing attentionals.

- A.1. Adding or deleting an attentional.
- A.2. Moving an attentional.

B. Clarifying the utterance for the listener

- B.1. By changing phrasing to the listener's perspective,

for example: " I need the blue"

> " You give me the blue".

B.2 Changing from interrogative to imperative mood

for example: " Can you draw?"

> " You draw".

C. Focussing the utterance

C.1. By adding words,

for example: "Use the blue now"

> "Use the blue paint now"

C.2. By substituting a vague word (often a deictic term) with one which was less ambiguous,

for example: "Give me that "

> "Give me the blue ".

C.3. By changing the sequence,

for example: "Red over here "

> " Over here red"

D. Simplifying the utterance

D.1. By omitting non-essential elements,

for example: "Sit here by me and David "

> "Sit here by me".

D.2. By substituting a phrase for a word,

for example: "Find the long skinny shape like a shoelace"

> "Find the long one".

D.3. By exchanging a word for a more readily comprehensible equivalent,

for example: "Get the circle"

> "Get the round".

E. Making the utterance more polite by switching from imperative to interrogative mood,

for example: "Get the blue one"

> "Can you get the blue one?".

F. Developing the topic of the utterance,

for example: "Let's pretend to be nurses"

> "Let's pretend to be nurses in a hospital and pretend there are sick people".

## 21. EXCHANGES.

A larger unit of discourse, exchange (or "sub-sequence" Wells, 1985) is utilised widely in child language research. A typical usage is described by Garvey (1984) as, "Two linked units, usually contiguous, one from each of two speakers. Although the units in an exchange are linked, the term does not imply the nature of the link" (p.31). Stubbs (1983) notes that an exchange is the minimum unit of interactive discourse. A minimum exchange would consist of an initiation plus response (I+R).

Codings were made of exchanges in order to highlight the discourse interaction between target children and partners. Partners were not passive recipients of utterances and inclusion of exchanges illustrated their roles in the interaction.

Responses to SLD/MS child's utterances (excluding isolated vocalisations by SLD partners) over the whole transcript were coded using a modified version of the scheme proposed by McTear (1985) which is itself similar to that proposed by Stubbs (1983). A "no response" category was added to the categories proposed by McTear. McTear's scheme has seven types of exchange:

Initiation - an utterance that breaks continuity with the preceding discourse and predicts a response.

Response - an utterance that is predicted by and responds to a preceding utterance.

Response/initiation - an utterance that is predicted by and responds to a preceding utterance, and which simultaneously predicts a further response.

Response/(initiation) - an utterance that is predicted by and responds to a preceding utterance, and which simultaneously provides for the possibility of a further response.

Continuation - an utterance that continues or adds to a previous utterance in a turn.

Continuation/(initiation) - an utterance that continues or adds to a previous utterance in a turn, and which provides for the possibility of a further response.

Reinitiation - an utterance that attempts to elicit a response following an unsatisfactory response or no response at all.

The additional "no response" category was applied if there was no response by the target child to an utterance from the SLD/MS partner within 5 seconds.

Utterances by SLD children, within exchange sequences, that were not completely interpretable were classified as "response" only.

Total transcribed discourse from integration sessions, not just the 50U samples were coded for specific features of discourse that showed tutoring strategies or reflected dominance of children with SLD, by the NH speaker.

22. These specific features were

Tutoring strategies: including

- "step by step" teaching sequences,
- opening orienting remarks

Dominance:

- motherese, including diminutives,
- referring to SLD child in the third person (in SLD child's presence),
- protecting the interests of child with SLD,
- over-riding an SLD child,
- using "we" to sustain joint focus,
- showing SLD child's "good" work to an adult,
- providing personal care,
- reprimands and threats,
- appeals to adults for help in handling SLD child,
- private NM-NM discourse, reports of naughtiness,
- SLD children asserting themselves.

Transcription conventions and a sample coded transcript (LA, session 5) are given in Appendix 2.

### 7.2.5 Reliability

Three different aspects of the speech samples from NH-SLD dyads were examined for reliability:

- (a) accuracy of transcripts,
- (b) segmentation of utterances,
- (c) classification of functional coding.

Six scripts (8.7% of total NH-SLD samples; script =transcription of the total recorded discourse between one NH-SLD pair of children for one session) were coded by two raters. Two of these scripts were used as pilots (one for functional coding and the other for accuracy of segmentation and transcription). After discussion of differences in codings each of four scripts were coded for accuracy of transcription, segmentation of utterances and functional coding of utterances. (Further details of statistical data concerning inter-rater reliabilities are given in Appendix 1, Table 31).

- (a) There was high agreement concerning transcription with a mean raw agreement on individual words of 90.23% (s.d. 3.5). Differences in transcription were largely accounted for by speech which one coder was unable to decipher but which was deciphered by the other coder (mean 7.48%, s.d. 3.45).



(b) In many studies the identification of utterance boundaries has not been regarded as problematic. Often no inter-rater reliabilities have been made of utterance boundaries. Work by Wells (1985) is an exception and includes reports of high inter-rater reliabilities for utterance segmentation using pause and intonation as cues. Fletcher et al. (1986) do acknowledge a problem of fuzzy boundaries between utterances. They resolved the difficulty by devising detailed procedures for determining utterance boundaries on the basis of specific grammatical structures. These were not used in the study reported here and utterance boundaries were judged subjectively using pause and intonation cues.

Inter-rater agreement of segmentation of utterances was also high. Boundaries between words were coded as either an 'utterance split' or 'no utterance split'. Raw agreement ranged from 92.1% (script 2) to 95.2% (script 1) and kappa .75-.89, mean .85 (s.d. .07).

(c) Raw agreement of functional coding ranged from .75 (script 1) to .9 (script 2), mean across all four scripts 82.25 s.d. 6.18. Kappa was moderately high, mean .71 (s.d. 0.14) for the four scripts. In a number of cases differences in codings reflected the lack of contextual detail for the second coder who was not present in the test situation and was working from audiotapes and transcriptions only.

### 7.3 RESULTS

The focus in the present study was on the quality of NH-SLD verbal interaction. The data collected reflected also points raised in the two earlier studies. Two findings from Study 1, that interaction with adults, by NH children, significantly decreased across the three phases of the integration project; and that NH-SLD pairs tended to be of the same sex, were assessed again in the present study. Findings related to these points are reported first (7.3.1 and 7.3.2).

The total duration of recordings collected for each NH child in each integration and M5 session, absences, sessions in which no discourse was recorded and identities of SLD and M5 partners, are given in Appendix 1, Table 28. Statistical data analyses concerning NH-SLD discourse are based on a sample (i.e. 504 samples, described in 7.2.4, point 4) of all the available recordings. A revision of this data base is given in 7.3.3.

#### 7.3.1. Utterances to adults in integration sessions

The observation data (Study 1) indicated that there was a significant decrease in interaction with adults over time. Did the same pattern of decreasing

interaction with adults occur in the following year with a different group of NH children and focusing on verbal interaction only?

16.5% (mean per session) of utterances in the UTA samples (see 7.2.4, point 3) were addressed to adults (details in Appendix 1, Table 29). Utterances to adults were generally, as in Study 1, less frequent in later compared with earlier sessions. However, in the present study this decrease did not reach statistical significance. The particularly high figure for utterances to adults in session 4 (mean 52.9%) may be a reflection of the location for that session. It was the only session to be held in the special school. This was the first (and only) visit to the special school by the NH children and it is probable that they felt some anxiety and apprehensions about the situation. It is likely that such anxieties were reflected in the relatively high proportion of utterances to adults.

Examination of the content of utterances by NH children to adults during integration sessions showed that the large majority of these utterances concerned questioning about the task (e.g. "Do we do the paint now?") or general adult-child talk (e.g. about weekend activities). However a minority of utterances did focus on children with SLD, either by NH children showing the work of SLD children to adults or by NH children appealing to adults for help in dealing with SLD children. These two points are considered further

later (7.3.5.1). There were some examples (11 instances in total) of NH children asking adults about SLD children (e.g. "Can he speak?"). There is therefore some support for the suggestion made in Study 1 that NH children used adults to find out about the nature of SLD.

#### 7.3.2. Identities of NH-SLD pairs

The identities of SLD partners of NH children varied between sessions and some pairings were relatively consistent between sessions (see Appendix 1, Table 28). Partners did not change within any one session. NH children tended to work with partners of the same sex as themselves and, as in Study 1, this was statistically significant ( $\chi^2=34.26$ , d.f.=1,  $p<.01$ ).

#### 7.3.3 Revision of data sample for statistical analyses

Statistical results are based on a sample of recorded discourse. However the use of statistical tests, in particular 3-way analysis of variance, suggested that data points arising from infrequent NH-SLD pairings should be omitted from the analyses. This led to the exclusion of four data points from each 50U sample, prior to analyses.

The excluded data points (identical cells in each analysis) were two sessions in which a "replacement" child with SLD (X or Y) was involved in the integration sessions to cover for the absence of an SLD child (i.e., X who attended only one integration session (session 1) and was paired with SA; and Y, who also attended once only (session 6) and was paired with TD). In addition, one NH child (CA) left the mainstream school part way through the year and was recorded in only two integration sessions (sessions 3 and 4). Therefore data derived from codings of her discourse have also been excluded. Session 7 (no recorded discourse for any NH-SLD pairs) was omitted.

The resultant data points, duration of recording for each sample, and number of utterances by each NH child in integration and M5 sessions, on which statistical analyses are based are shown in Appendix 1, Table 30.

7.3.4 Characteristics of talk by NH children to  
children with SLD

Rationale for the use of 3-way analysis of variance  
using the modified data sample (as in 7.3.3)

The data on discourse in NH-SLD dyads fall into a three way layout: (i) identity of the NH speaker; (ii) session and (iii) identity of SLD partner. The design is very unbalanced as many of the cells are empty since not every NH child worked with every SLD child and there was some absenteeism among both NH and SLD children. Also, children had a free choice of partner in each session (see 4.3.2) leading to a small number of constant NH-SLD pairs across sessions (see Appendix 1, Table 28). In addition, in any particular session any one NH child could only feature once, therefore precluding within-session analyses. The unbalanced nature of the design means that great care must be taken when investigating the influence of the three factors (NH child, session, SLD child) on the various aspects of the discourse.

One possible strategy is to make separate non-parametric analyses of each of these three factors: that is, one analysis for systematic effects of the identity of the NH child, one analysis for the effects

of session and one analysis for the effects of the identity of the SLD child. However the rank transformation used in most non-parametric techniques (e.g. Friedman test) is unlikely to remove the confounding effects of one independent variable on another. For example, a particular percentage use of requests could be high or low due to the influence of the identity of either the NH or the SLD child.

In view of this, an ANOVA procedure was used that was suitable for non-orthogonal and unbalanced designs (Overall and Spiegel, 1969). In this procedure, the effect of each factor was examined after all variance that could be ascribed to the other two factors was partialled out. This was conservative in that variance which could be explained by more than one of the factors was assumed not to be due to the factor under consideration. In essence a model was fitted that predicted the data as far as possible on the basis of the other two factors. Then the third factor was tested on the basis of how much of the residual variance it could explain.

Limited degrees of freedom meant that it was not possible to test for interactions among the three factors. (This difficulty would also have occurred had non-parametric tests been used.) The ANOVA calculations were performed using general purpose regression routines in the MINITAB statistics package. (The resultant F ratios are summarised in Appendix 1, Table 31.)

The validity of using parametric tests was checked by plotting the distribution of residuals for data on each discourse feature. In all cases the assumption of normal distribution in the parent population was met.

7.3.4.1 Utterance functions used by individual NH children to SLD partners

The use of various utterance functions (identified in 7.2.4, points 7-16) will be examined in turn in relation to each of the three variables given above.

REQUESTS.

This was the most frequent functional category, accounting for nearly half of all utterances (mean, 42.9%, s.d. 12.7; see Appendix 1, Table 32) in NH children's talk to SLD partners, for example:

SH (session 4) "In the middle",  
"Blue there",

SA (session 6) "You pick it up"



KE (session 10) "You move".

(i) Significance of the identity of NH child on the use of requests

There was a wide variation between NH children in the use of requests, ranging from SH (mean 34.6%) to EL and KE who used the request form in nearly two thirds of sample utterances to SLD partners. However the difference between NH children in the use of requests to SLD partners was not statistically significant.

(ii) Significance of session on the use of requests

Similarly, there was a wide range across sessions in the use of requests. The effect of session on use of requests was significant ( $F=3.50$ ,  $d.f=8,37$ ,  $p<.01$ ). Post hoc tests failed to reveal any significant trends in the use of requests. However, it is evident from session data (Appendix 1, Table 32) that requests were particularly high in session 10 (PE) although this alone did not account for the significant effect of session on the use of requests.

(iii) Significance of identity of SLD partner on the use of requests

Identity of the SLD partner was not statistically

significant in use of requests.

#### PROHIBITIONS.

Prohibitions were, like requests, a type of directive but whereas requests were instructions to do something, prohibitions were requests to desist from particular actions. Prohibitions were infrequent (mean per NH child 4.8%, s.d. 2.2; see Appendix 1, Table 33). Examples of prohibitions included:

- LA (session 1) "No don't put the bead in."  
CL (session 5) "Don't do that yet".

(i) Significance of the identity of NH child on the use of prohibitions

All NH children used some prohibitions in integration sessions, although overall prohibitions were infrequent and no NH child used them in every session. Differences between NH children in the use of prohibitions was not statistically significant.

(ii) Significance of session on use of prohibitions.

The percentage of prohibitions varied slightly across integration sessions. In particular, session 10 (PE) was relatively low in prohibitions (used briefly by only two children) although, as noted earlier, that

session was characterised by a high mean percentage of requests. There was a tendency for the use of prohibitions to decrease in later sessions but this did not reach statistical significance.

(iii) Significance of identity of SLD partner on use of prohibitions.

Use of prohibitions across different SLD partners was not statistically significant, indicating that no particular SLD children were eliciting consistently high/low levels of prohibitions from different NH children across integration sessions. As a small number of the SLD children frequently misbehaved, were reprimanded by many different adults on various occasions, and this was referred to in attitude interviews (Study 2); one might have anticipated that those SLD children with an evident reputation for "naughtiness" would have consistently received prohibitions from NH partners. However this was not the case.

#### PROMPTS.

Prompts (or suggestions) were a milder form of command than request. They were a hint at action rather than explicit commands. It is therefore interesting to consider the distribution of these less forceful commands. Prompts were used infrequently in the

integration sessions (mean 6.5%, s.d. 3.7; see Appendix 1, Table 34). Examples of prompts (sometimes distinguished from other functional categories by contextual cues) were:

CL (session 2) "Shall we do a bit of red now?"

EL (session 6)

"Want to do some glue on the eyes?"

(1) Significance of the identity of NH child on the use of prompts.

As noted above, prompts were used infrequently to SLD partners. However two children (SM and CL) were relatively high prompters. Differences between NH children in the use of prompts were not statistically significant.

(b) Significance of session on the use of prompts.

The differences in use of prompts across integration sessions was statistically significant ( $F=2.65$ , d.f.=8,37,  $p<.05$ ). There was a significant linear trend ( $F=5.2$ , d.f.=1,37;  $p<.05$ ) with prompts decreasing over sessions.

(c) Significance of identity of SLD partner on the use of prompts.

As in the use of requests and prohibitions, identity of SLD partner was not a statistically significant variable in the use of prompts.

#### MONITORS.

Monitors, or reports, were utterances that commented on the task or situation, for example:

JO (session S9) "Might be under the table"

(looking).

EL (session S5) "That's a nice painting".

CL (session M5) "I'm not very good at giraffes".

Monitoring was the second most frequently used functional category and accounted for approximately one fifth of utterances to SLD partners (mean 21.7%, s.d. 6.2; details in Appendix 1, Table 35).

(a) Significance of the identity of the NH child on the use of monitoring.

Two children (SH and SA) were high in their use of monitoring with between approximately one quarter and one half of their utterances being of this type. Differences between NH children in the use of monitoring

were not statistically significant.

The use of evaluatives (a sub-group of monitoring) in integration sessions was not distributed evenly across NH children. Two children (WA and KE) each used evaluatives once only whereas evaluative utterances by EL and SM accounted for over half (47/89) of all evaluatives in integration sessions.

(b) Significance of session on use of monitoring.

There was a statistically significant difference across sessions in the use of monitoring ( $F=3.53$ ,  $d.f.=8,37$ ,  $p<.01$ ). There was a significant quadratic trend ( $F=8.14$ ,  $d.f.=1,37$ ;  $p<.01$ ) indicating a tendency to increase monitoring until session 6 and decrease monitoring thereafter.

(c) Significance of identity of SLD partner on use of monitoring.

Differences in the use of monitoring across SLD partners were not statistically significant, that is, particular SLD children did not consistently elicit similar levels of monitoring from different NH children across integration sessions.

#### QUESTIONING.

Questioning, like monitoring, occurred infrequently

(mean 7.6%, s.d. 1.8; see Appendix 1, Table 36) in talk by NH children to SLD partners.

(a) Significance of the identity of NH child on the use of questioning.

All NH children used questioning with SLD partners on some occasions. Differences in percentage use of questioning between NH children was not statistically significant.

(b) Significance of session on use of questioning.

There was a wide range in the use of questioning across sessions and differences across integration sessions reached statistical significance ( $F=2.65$ ,  $df=8,37$ ;  $p<.05$ ). The P.E. session (session 10) was, predictably, low in questioning (mean 0.8%) and this accounted for the significance of intra-session differences ( $F=5.01$ ,  $df=1,37$ ,  $p<.05$ ).

(c) Significance of SLD partner on use of questioning.

Differences in the use of questioning across SLD partners was not statistically significant.

#### OTHER FUNCTIONAL CATEGORIES.

Explanations, affirmatives, self-maintaining

utterances, attentionals and unclassified utterances constituted a very small minority of utterances and are not examined in detail.

#### SUMMARY OF FINDINGS CONCERNING MAJOR UTTERANCE FUNCTIONS

Analyses of the use of the major utterance functions showed no statistically significant differences across NH children or SLD partners. There was a large amount of flexibility in the use of the major utterance functions between the same NH child when paired with various SLD partners. It was not the case that NH children had characteristic discourse styles, in terms of major utterance functions, which were consistent regardless of the identity of SLD partner or session activity. Also, particular SLD partners did not consistently elicit similar levels of utterance functions across various NH children. For example, SLD children who were regularly difficult to control did not elicit similar levels of prohibitions from the various NH partners.

Four of the five major functional categories identified (requests, prompts, monitoring and questioning) showed statistically significant differences in usage across different sessions. These differences were highly significant for requests and monitoring ( $p < .01$ ).



#### 7.3.4.2 Reformulations and repetitions

The nature and extent of repetitions and reformulations provided indications of the manner and extent to NH children persevered at developing and sustaining a communication with SLD partners. Overall figures for reformulations and repetitions indicated that considerable efforts were being made by NH children to develop and sustain a joint understanding. Approximately one quarter of all utterances in the samples were either a reformulation (mean:11.1%, s.d. 5.1; see Appendix 1, Table 37), or repetition (mean:11.1%, s.d. 4.3; see Appendix 1, Table 38), of an earlier utterance within the speech topic. There were no statistically significant differences in the use of reformulations or repetitions between NH children, integration sessions or SLD partners (F ratios given in Appendix 1, Table 31).

The correlation for percentage use of reformulations compared with repetitions was low ( $r=0.34$ ,  $n=9$ , NS) indicating that a high or low use of reformulations was not associated with a comparable proportionate use of repetitions. That is, individual NH children were not, for example, tending to repeat and to reformulate a large proportion of their utterances; but, for whatever reason, they showed individual preferences for either reformulating or repeating utterances.

Use of repetitions and reformulations within  
speech topics.

Overall frequency of use of repetitions and reformulations masks possible variation in how these were used within speech topics. This is the focus of the present section. Data focus on numbers of successive pairs of repetitions or reformulations within speech topics (shown in Table 5 below). (See also Appendix 1, Tables 39 and 40).

The figures in the right hand column in Table 5 provide a further indication of the persistence of NH children in attempting to communicate with SLD partners. These figures show the percentages of repetitions and reformulations which were part of a sequence of reformulating or repeating an utterance to the SLD partner. A high percentage figure in the right hand column (for example, CL) indicates that the NH child recurrently reformulated and /or repeated an utterance within speech topics. Conversely, SH successively reformulated and/or repeated utterances relatively infrequently. It was more usual for her to make "one off" repetitions or reformulations and then to move to another speech topic.

Table 5: Numbers and percentages of utterances for each NH child, in amended 50U samples of discourse from integration sessions, which were in a sequence of reformulation followed by reformulation (ref/ref), reformulation followed by repetition (ref/rep), repetition followed by repetition (rep/rep), or repetition followed by reformulation (rep/ref).

	ref/ref	ref/rep	rep/rep	rep/ref	TOTAL
LA (no.)	10	8	1	6	25
(%) *	19.6	15.7	2.0	11.8	49.0 *
SA (no.)	4	2	10	3	19
(%) *	8.5	4.3	21.3	6.4	40.4 *
EL (no.)	19	2	3	6	30
(%) *	23.2	2.4	3.7	7.3	36.6 *
SH (no.)	7	4	6	5	22
(%) *	10.8	6.2	9.2	7.7	33.8 *
WA (no.)	0	2	4	5	11
(%) *		6.5	12.9	16.1	35.5 *
KE (no.)	23	5	6	7	41
(%) *	26.4	5.7	6.9	8.0	47.1 *
JD (no.)	3	5	7	2	17
(%) *	6.4	10.6	14.9	4.3	36.2 *
CL (no.)	8	6	27	6	47
(%) *	8.4	6.3	28.4	6.3	49.5 *
TD (no.)	3	0	12	1	16
(%) *	2.2		26.1	2.2	34.8 *
					228
Mean %	11.3	6.4	13.9	7.8	
s.d.	(8.9)	(4.5)	(9.6)	(4.1)	

\* out of all repetitions and reformulations in amended 50U samples.

Successively repeating an utterance (used particularly by SA, CL and TO) was, overall, the most common of the four strategies identified and, arguably, the least appropriate for SLD listeners. By contrast, successively reformulating an utterance in a speech topic (used by EL and KE, in particular) might be regarded as both more appropriate for SLD partners and indicative of considerable motivation to communicate with the listener. The use of rep/rep and ref/rep strings (combined) by different NH children was statistically significant ( $F=2.25$ ,  $d.f=8,37$ ,  $p<.05$ ) suggesting that a preference for using these strategies (contrasted with ref/ref or rep/ref strings) was related to within-child factors. Session and identity of SLD partner were not significant in use of particular sequences of repetitions/ reformulations.

#### Types of reformulation

A reformulation of an utterance could be carried out in various ways. The types of reformulation identified in the present study have been classified earlier (see 7.2.4, point 20). The types of reformulation made are summarised in Table 6.

Table 6: Numbers and percentages of reformulated utterances in amended 50U samples from integration sessions (grouped), which were in each of the identified categories of reformulations.

	number	%
A. Attention-getting:		
1. adding name	24	8.0
2. moving name	5	1.7
Sub-total:	29	9.7
B. Clarifying		
1. changing to partner's perspective	4	1.3
2. changing from interrogative to imperative mood	2	0.7
Sub-total:	6	2.0
C. Focusing		
1. words added	83	27.8
2. vague word changed to specific	34	11.4
3. sequence changed	1	0.3
Sub-total:	118	39.5
D. Simplifying		
1. non-essential details omitted	106	35.5
2. phrase changed to simpler word	26	8.7
3. word exchanged for simpler word	8	2.7
Sub-total:	140	46.9
E. Making utterance more polite	2	0.7
F. Developing utterance topic	4	1.3
Total	299	100.0

Table 6 shows that the large majority of reformulations were either focusing or simplifying an earlier utterance. Within the focusing category, over two thirds of reformulations involved adding words while the other one third entailed replacing a relatively vague word with a more specific term. In the latter case the "vague" word was often a deictic term. Focusing the purpose of the utterance by adding words, developing the topic of the utterance and adding the partner's name to the preceding utterance all lengthened the initial utterance. Reformulations involving lengthening of an utterance (see Appendix 1, Table 41) were not significantly related to identity of the NH speaker, identity of SLD partner, or session.

Most reformulations in the simplifying category involved omitted non-essential elements of the preceding utterance. In practice, this often involved dropping an opening phrase, for example, "Oh look shall we go and do this?" to "Go and do this?". This had the effect of both shortening and simplifying the utterance. Reformulations involving shortening an utterance (see Appendix 1, Table 42) were not significantly related to the identity of the NH child, identity of the SLD child or session.

Markedly infrequent types of reformulations were increasing the politeness of an utterance, adding information about the topic of the utterance and

changing the initial utterance from the interrogative to the imperative mood. The former two would probably have been inappropriate for SLD listeners and the third required quite sophisticated linguistic skills of the speaker.

The data presented have utilised samples of NH-SLD discourse. A disadvantage of such a sampling approach is that infrequent features are omitted or under-represented. Exchanges involving speech by SLD children were very infrequent. These will be examined in the following section using the total recorded discourse, excluding discourse involving CA who left the mainstream school part way through the year.

7.3.4.3 Exchanges (based on total discourse  
recorded excluding that for CA).

Talk in the integration sessions was heavily dominated by NH children and there were very few utterances by children with SLD in the recorded discourse. Utterances by children with SLD in the total discourse sample, in sessions 1 to 4 inclusive numbered only 20, while the number of utterances by SLD children in the eleven integration sessions totalled 240. The lack of speech by children with SLD was not an artefact of the recording method. The sensitivity of the microphones was demonstrated by their recording of speech from MS partners.

Exchanges were coded using McTear's (1985) classification (see 7.2.4. point 21) and results are summarised in Table 7. Approximately one quarter of utterances (23.3%) by children with SLD were initiations, the remaining utterances being some form of response to NH partner. Few utterances by children with SLD (14.6% of all utterances by SLD children) received no response from NH partners and over one third of utterances by children with SLD to NH partners were part of a conversation involving reciprocal responses from each partner.



Table 7 : Numbers and percentages of utterances, by children with SLD which were initiations or responses to the NH partner and which, in turn, were received by NH partners, with an initiation, a response type (i.e. a response, or a response plus initiation, or a response plus possibility of initiation), or no response.

Utterances by children with SLD					
followed by target child:	initiating speech topic		responding to target child		Total
	no	%	no	%	no %
initiating new topic	20	8.3	70	29.2	90 37.5
giving response type	24	10.0	91	37.9	115 47.9
making no response	12	5.0	23	9.6	35 14.6
Total	56	23.3	184	76.7	240 100.0

#### 7.3.4.4 Tutoring.

Examination of exchanges leads to consideration of the flow of the discourse and in particular, how individual NH children taught SLD partners. In this section the discourse of NH-SLD dyads engaged in peer tutoring are considered. The total available recordings (excluding those involving CA) have been scanned for examples of tutoring style.

There was evidence that NH children understood the tutoring "script" and there were many examples of NH children explicitly tutoring their SLD partners. Tutoring was carried out by all NH children and took various forms including modelling a teacher's instructions to SLD children (eight NH children), sequencing the teaching of a task into small, logical steps (all NH children), providing frequent and positive feedback (six NH children) and being both clear and precise about what was required of the SLD child (four children). Modelling of teacher utterances may have occurred more frequently than was evident from recordings as the NH children would have been able to hear teacher utterances and model them but the tape recording may have obscured the teacher utterance being modelled. Numbers of sessions in which each of these features occurred for each NH child are given in Appendix 1, Table 43.

Some of the features found in tutoring of children with SLD by NH partners are illustrated in the extract from CL's talk with his partner (recorded during integration session 11, during which CL and his SLD partner (B) were making model ducks with lego):

- an opening orientation to the joint task (line 1)
- positive feedback (lines 4 and 20)
- drawing attention to what it is that B is doing correctly (line 33)
- reporting to an adult about the joint task (line 9)
- being explicit about what B has to do (lines 14 and 36)
- dividing the task into small steps (line 14)
- using tonal cues for emphasis (lines 1, 20, 27, 29 and 30)
- use of partner's name to keep his attention (lines 4, 5, 10, 14 and 15)
- the pace of CL's talk is appropriate, it flows fairly briskly but there are periods of quiet.

[Times, in minutes: seconds, from start of recording]

[See Appendix 2 for transcription conventions]

Partner : B (SB)

CL

1. 04:00 We're making a duck  
2. ain't we?  
3. 04:15 [CL making a  
4. duck with lego That's good ain't it B?  
5. bricks] B!  
6. A duck  
7. 04:30  
8. It's a duck  
9. 04:45 [CL to adult] Me and B's made a duck  
10. 05:00 B! Shall we make  
11. another one?  
12. Come on then  
13. 05:15 Now you help..right  
14. Put 2 in the bottom B  
15. B  
16. You help me eh?  
17. Come on then  
18. No  
19. 05:30  
20. [B passing a brick] Oh that's good  
21. Wait  
22. 05:45

23. Right.. that's our  
24. third duck  
25. Now we'll make another  
26. one  
27. Make one bigger than  
28. 06:00 the other one eh?  
29. Bigger one?  
30. Bigger?  
31. Thank you  
32. THANK YOU  
33. NOW you're helping  
34. 06:15  
  
35. Thank you  
36. You keep getting some  
37. bricks

This extract also illustrates points raised earlier; there are many requests, but few questions or monitoring utterances. There is one repetition and a number of reformulations of utterances, most of which involve shortening the utterance in some way. Anaphoric reference occurred in lines 11 and 26. Overall, this extract conveys a sense of purpose in CL's actions and speech, a sensitivity to his partner, and involvement of B, although he does not make any verbal contribution to the discourse.

CL makes assumptions about B's abilities; for example, that B will understand the meanings of "duck", "two" and "bigger" and will understand to what deictic terms, for example "one" in lines 11 and 26, are referring. "Two" may have been accompanied by non-verbal gestures to illustrate the meaning. Similarly, "bigger" may have been illustrated with gestures. The repetition of bigger (lines 29 and 30) suggests that CL, probably correctly, inferred that B did not fully understand the term. The use of ordinal number ("our third duck", line 24) was probably not understood by B. It was not repeated by CL and it is not clear whether CL thought that this was too difficult or that it had been understood by B.

CL reported the progress of the joint activity to an adult, stating that it was a joint task although most of the activity had, in fact, been carried out by CL. This suggests that CL had understood the emphasis placed by adults on working cooperatively with children with SLD. The following section examines ways in which attempts to dominate NH-SLD interaction are evident through the discourse.

#### 7.3.4.5 Dominance in NH-SLD interaction

The previous section has examined results concerning the nature of talk by NH children to SLD partners in terms of the use of particular functions and forms of the discourse, exchanges and tutoring strategies. Now other features of the discourse that show the quality of NH-SLD interaction will be considered. These results are based on the total recordings of discourse (excluding those for CA) in integration sessions. Numbers of integration sessions in which particular features occurred are summarised in Appendix 1, Table 44.

#### Using "motherese" to an SLD child

One feature associated with talk to very young children is "motherese". This was used towards children with SLD by three of the four NH girls, but none of the NH boys. It took various forms including the use of diminutives such as "doggie" (SA, session 11) or "neigh" to mean a horse (SH, session 9, "Where does that horse go? ... it's a (neigh noise) ... where does it go?") and "sweetie" (EL and SA, session 9) and expressions like "You mucky little bumbly bumble bee" (SH, session 11). Similarly animate pronouns were used, particularly by EL, when talking with SLD partners, to refer to inanimate objects. Another form of motherese found in

the recordings was the use of an abnormally accentuated and high pitch. Many of EL's utterances were voiced in this exaggerated manner.

Referring, in the presence of the child with SLD, to him/her in the third person.

Seven of the NH children occasionally addressed comments about the child with SLD to other children or adults and referred to the child with SLD as "he"/"her", and on two occasions "it", although the child with SLD was "in" the conversation.

For example, TD (session 6):

Y(SB) sitting next to TD, glueing fabric to paper.

TD: [To teacher from the special school]

Is this his first day.

Teacher: It's his first

time to come here but

it's not his first day

at [special school]

TD:

Did he come..

Did he come on Saturday

or something like that?

[? no response]

To Y (SB)

Where's the other eye?..

\*\*\*\*



Protecting the interests of children with SLD

There were two instances in which NH children protected the interests of partners with SLD. This is illustrated in TO's (NH boy) talk about B (SLD boy) in session 9.

TO

21:00 [T (special school  
boy, taking some  
sweets from a table]

To T:

THEM are B's

21:15

21:30 [Addressed to?]

Where are B's?

B hasn't got his.

21:45

22:00

B!

B!

Come on B!

B! B!

22:15 [CL to TO]

Have B got his?

No [sounding worried]

B

22:30 [TO finding some of

B's sweets]

Do you want them?

B- vocalisation  
[not interpretable]

(T0 to adult) He doesn't want them.

Miss A:

Well put them in the bin  
or eat them yourself

I'll eat them myself.

22:45 To EL

You've got yours anyway

I had 4 to myself cos

(B wandering off)

B didn't want his..had

4 to myself.. 4 I did,

I had 4, I had 2 plus

2 cos he didn't want  
his.

In this extract T0 acted for his SLD partner, B, in challenging T and then looking for B's sweets. T0 showed concern that B's sweets were possibly being eaten by another child (T) and although B was present he did not make any vocalisations when T0 challenged T. The only vocalisation from B in this sequence was at 22:30 when he responded to T0's question. Although T0 had been acting for B, T0 did not presume that B did or did not want the sweets and asked him about this directly, not through an adult.

Similarly EL (NH girl) (session 8) spoke for her SLD partner (S, SLD girl) and in so doing tried to defend her. In this case it related to an adult:

Teacher

EL

[To S, EL's partner]:

Go and wash again

She just went and had a wash

Go and have another one

[resignedly] Come on then

Over-riding the SLD child

Discourse was dominated by the NH children in the integration sessions. However, as noted when exchanges were considered, (7.3.4.3), SLD children did make verbal contributions to the discourse. In some cases the content of their contributions was countermanded by NH partners.

NH children occasionally over-rode SLD partners through making assumptions, not always correctly, about the abilities of SLD children. Seven of the NH children did this, in general the assumptions reflected low expectations of the abilities of the SLD children. For example, JO (NH boy), to E (SLD boy) in session 9, while doing an inset board puzzle:

"Right that goes in there.

(without waiting for E to try)

I've done that..it's a bit hard for you."

The following extract illustrates how SH (NH girl) tried to dominate interaction with J (SLD boy) and to over-ride his expressed wishes. Similar incidents occurred in the speech of a number, but not all, of the NH children when addressing SLD partners.

J

SH

10:15 [Miss A to J:]

All over then

SH reaching for the glue

brush

J- I DO IT

10:30

I'm going to put some  
more glue..

[J picking up  
glue brush & dabbing  
puppet with it]

[muttering:]

Well I did need a  
little bit of glue there  
[To J:]

THAT S ENOUGH

[muttering:]

10:45

(I'm taking that away  
before he's..going to..

(To J1)

11:00

That's enough at the  
moment I think

J1 vocalisation

Going to put that on  
the head?

For the hair?

11:15

[Mrs V, to whole  
class:]

Time to pack away

I'm not ready.

11:30

J1 vocalisation

Ugh he's making my  
puppet in a dreadful ..

(Miss A to J1)

Let the little girl  
finish it off

11:45 J1 vocalisation

....I DO IT.

I'll finish it off.

J1 NO!

Miss A : J1

J1 I DO IT.

12:00

Mrs V [coming up to  
table] to J1

Put the hair on...

Thank you.

Don't put glue on

12:15 your face.

12:30 [J taken out by

Miss A to have face washed] Let's hope I can do it.

12:45 [Mrs V passing brush

to SH]

[To Mrs V:]

He made it a terrible  
mess..

Kept on putting glue  
all over it.

In this extract there were several occasions when SH and her partner J were both trying to take control. At 11:45 SH explicitly over-rode J, having been prompted by Miss A to take over the task. On two occasions (10:15 and 12:00) J was able to take control of the task. SH re-gained the task when J had been taken away to wash his face but she did not explicitly ask the teacher if she could resume the work. She used two more subtle strategies; first, expressing a wish that she would be allowed to do the task (12:30) and second, as if consolidating the teacher's non-verbal signal to her to carry on with the task, complaining about J's work (12:45).

Use of "we" and maintenance of a joint focus

The research literature indicates that in some contexts use of "we" is associated with speech by a higher status, to a lower status, individual. The aims of the integration project, for both schools, emphasised the importance of the pairs of NH-SLD children working cooperatively on a common task and the adults involved often reiterated the cooperative nature to mainstream children. Therefore it is not always clear whether use of "we"/"us" reflects a lower status listener, or adults' emphases on joint work (as in CL's comment, 7.3.4.4, to a teacher about a jointly produced duck).

All NH children used "we", "ours" and "us" to SLD partners. However none of the NH children used the plural rather than the singular form consistently. In some cases use of "we" reflected the joint nature of the task as in:

"We'll do this colour" (LA, session 1)

"Shall we do a bit of red?" (CL, session 2).

In other cases use of "we" seemed to reflect a speaking for the SLD child as in:

"We know which is ours" (SH, session 2).

Showing the SLD child's "good" work to an adult

Half the group of NH children, in at least one session each, drew a teacher's attention to the work of an SLD child. The extract below illustrates how JO (NH boy) paired with D (SLD boy) (session 8) repeatedly showed to adults work done by D.

D

JO

15:00 [To adult, Mr R, LOOK WHAT D done!  
special school [proudly]  
teacher]

Mr R:

D that's beautiful.

15:15

MISS

Miss A [(mainstream  
teacher)]

D just done that!

Miss A:

Isn't that lovely.

15:30 [To special  
school teacher,

D just done that.

Mrs V.]

Miss A:

It's lovely isn't it.

15:45

Doh

[D wandering off]

D! [crossly] D!



The tone of JO's voice conveyed pride in what D had done. There is no evidence of any vocalisation from D throughout this sequence and at 15:45 (minutes from start of recording) D had wandered off.

Providing personal care for SLD child

Caring for the personal needs of children with SLD was carried out on several occasions each by six of the NH children. In many cases this involved helping the SLD child to wash his/her hands. Adults explicitly encouraged this type of helping behaviour although it seemed probable that the children with SLD could carry out many of the tasks which the NH children performed for them, for example turning on taps, putting a coat on and rubbing soap on hands. NH children often quickly volunteered to do the task for the SLD child before the child had apparently begun the task. However, as many of these instances of personal care took place outside the classroom in a washroom area only auditory cues are available on which to base interpretation of the events.

Reprimands and threats to SLD partners

Five NH children (LA, EL, SH, JO and CL) reprimanded SLD partners. Reprimands were given for misbehaviour, rather than for mistakes on a task; and often omitted an explanation or clarification of the unacceptable behaviour. EL, unlike other NH children, invariably tagged a reprimand to her SLD partner, with a clear indication of what was being reprimanded. The strength of reprimands was generally mild. SH was more frequent than other NH children in threatening or reprimanding children with SLD and did so several times in most sessions; she was also more forceful than other NH children in the strength of reprimands to various partners with SLD.

Two children (SH and EL, NH girls) threatened SLD partners on a number of occasions in several sessions. Occasionally these threats were forceful in both tone of voice and content. This is illustrated in the extracts below of SH's speech to her partner K in session 11. During this period the two girls were playing with various table-top games, including jigsaws.

SH

12:45

K STAND UP. (.)

[crossly but quietly]

(or) I'll leave you

.....

19:30

And you're NOT going to

play me up the way

you were, are you

19:45

Not going to be moody?

Right

.....

20:45

Stick that tongue back in or

[spoken in a very quiet

but angry tone]

I'll chop it out for dinner

.....

29:30

WOULD YOU DO THE DRAWING,

I came over here for you

to have some fun .

You don't think you're

going to get away with it

Cos you're notYou're gonna draw your picture

29:45 [Adult intervening:]

That one's done.

[muttering]

To K

You should have been able to do that

(by heart)

Two other NH children (CL and LA) made single (mild) threats, such as "I'll tell" (CL, session 11). The remaining five NH children made no recorded threats to children with SLD.

The use of threats and reprimands may have been an indication that NH children found children with SLD difficult to work with. This point is evident in appeals to adults for help in dealing with SLD partners.

Appeals to adults for help in working with  
children with SLD

All except one of the NH children (SA) had some difficulties in dealing with the children with SLD. These difficulties often arose through misbehaviour of the SLD child. At times NH children were clearly uneasy about what to do, for example, when an SLD partner, repeatedly refused to cooperate. The anxieties about dealing with SLD partners were conveyed through tone as well as through the content of what was said; as in the following example in which TD (NH boy) was concerned about an SLD child banging an electronic organ:

NH boy: TO

[To SLD child]

Hang on!

[Shouting]

HE CAN'T PLAY WITH THAT

It's Miss A's.

OH

[Shouting, no adult nearby]

TELL THIS KID!

[Adult moving towards him]

(He) keeps wanting to play  
with that

[Adult to TO]

Have you found some shapes yet?

This extract illustrates how talk to individuals other than the SLD partners conveys information about attitudes towards children with SLD. Discourse between NH children contained information about how children with SLD were referred to in conversation with NH peers.

Private discourse among NH children concerning  
children with SLD

The tape recorders were worn by the NH children and the recorders were not switched off if the wearer left the classroom, for example, to go to the adjacent washroom. At these times, and also when talking quietly

to another NH child in the classroom, NH children made remarks about the children with SLD which were presumably intended to be private. Decisions about whether or not one ought to analyse such remarks raise ethical questions. However, these private remarks have been studied for the light which they may shed on attitudes held by NH children towards SLD peers and why NH children addressed SLD partners in certain ways.

All except two NH children (KE and CL) engaged in some "private" conversations, about the SLD children, which were recorded. The "private" remarks were predominantly of one particular type; that is, the reporting of misbehaviours of the SLD children. On one occasion NH children colluded with one another (session B, LA and SA) against a child with SLD, focusing on misbehaviour (putting paint on the washroom door) by the SLD child. The two NH girls discussed how to deal with the SLD child and decided to pretend that one of them had gone to tell the teacher about the SLD child's misbehaviour. LA firmly told the SLD child: "SA's gone to tell MR R [special school teacher] ... Right! Now you're going to get told off by Miss A [mainstream teacher]".

Many of the aspects considered so far in this section illustrate NH children dominating NH-SLD interaction. Some children with SLD reacted against this attempted dominance by asserting themselves.

SLD children asserting themselves

Six NH children had, in at least one session, an SLD partner who tried to assert him/herself despite, or perhaps because of, the NH child's attempts to dominate the interaction. Three of the SLD children (S, J, and P) accounted for most of these assertive incidents. Two of the NH children (KE and CL) who did not try to dominate interaction with SLD children as much as did the rest of the group were among the children with whom no assertive behaviour occurred. When the SLD children did reject suggestions or directions from a NH child, the SLD children were not usually able to sustain their opposition. The protests of the children with SLD were usually restricted to a single word, invariably "No", so that the NH partners were not able to deduce to what exactly the SLD children were objecting.

The features noted here supplement the earlier quantitative data and show some of the ways in which NH children dominated NH-SLD interaction. In general, fairly positive attitudes towards children with SLD emerge, although there is evidence that some NH children became frustrated by partners with SLD and occasionally found them difficult. The following section considers how talk to children with SLD compared with talk to younger mainstream children.

7.3.5 Comparisons between talk to partners with SLD  
and talk to M5 partners

It was suggested (7.1) that speech by NH children to SLD partners may resemble speech to NH children of younger chronological, but similar developmental, ages to SLD children. The term "target NH" children is used to refer to the six and seven year old NH children while the four and five year olds involved in the comparison M5 session are identified as "M5 children". The purpose of this section of the analysis is to consider the nature of discourse in the integration and M5 settings. Similarities and differences between the two settings will focus on the speech of target NH children. This will be examined according to utterance functions, use of repetitions and reformulations, types of exchange and attitudes implicit in the discourse.

7.3.5.1. Comparisons of functions of utterances in integration and M5 sessions.

Results for integration sessions in this, and the following two sections are based on the amended SOU sample described in 7.3.3. In grouped data, for integration sessions, calculations are based on means of mean percentages of utterances in categories for each target NH child.



The relative importance of different utterance functions varied widely in the two setting types. Details of means, standard deviations and paired *t* tests (2 tailed) for utterances in the major functional categories used by target NH children are given in Table 8 below.

Requests, the most frequently used functional category in integration sessions, were used significantly less in the comparison M5 session. Prohibitions were used little in integration sessions and not at all in the M5 session (in either the 50U samples or the total recordings of speech by target NH children to younger mainstream children.) The difference in use of prohibitions in integration, compared with the M5, session was statistically significant.

Prompts were used infrequently, both in integration sessions and in the comparison session with younger NH children. The difference in use of prompts between the two settings was not statistically significant.

Table B: Mean percentages, standard deviations and paired t-tests (2 tailed) for major functional utterance categories in amended 50U samples for integration (grouped) and M5 settings.

Functional category	S	M5	Paired t-test (2-tailed)
* requests	42.9 (12.7)	24.2 (13.5)	t= 3.03, p<.02
* prohibitions	4.8 ( 2.2)	0	t= 6.40, p<.001
* prompts	6.5 ( 3.7)	5.6 ( 4.4)	t= 0.46, NS.
* monitors	21.7 ( 6.2)	48.5 (18.0)	t= -3.81, p<.01
* questions	7.7 ( 1.8)	14.5 ( 6.8)	t= -3.06, p<.02
self- maintaining	0.2 ( 0.4)	3.8 ( 2.8)	t= -3.49, p<.01

s.d. figures shown in parentheses

\* Means, derived from data in Appendix 1, Tables 32-36.

Monitoring, questioning and self-maintaining were used significantly less in speech to SLD children than in speech to younger NH children (see Table 8). As shown in Table 9 there was a greater use of open questions with younger NH children than with SLD partners and comparatively high use of closed questions with SLD partners.

Table 9: Numbers and percentages of open and closed questions in discourse in amended 500 samples from integration (grouped) and M5 sessions

SESSION TYPE	OPEN QUESTIONS		CLOSED QUESTIONS		TOTAL (N)
	(N)	(%)	(N)	(%)	
Integration	24	(12.8)	163	(87.2)	187
M5	33	(52.4)	30	(47.6)	63

s.d. figures shown in parentheses

(Figures corrected to 1 decimal place.)

The frequency of evaluatives differed between the two session types. Overall, evaluatives formed 16.5% (89 utterances) of monitoring in integration session samples but only 4.6% (9 utterances) of monitoring in the M5 session. Only one target NH child used evaluatives in both settings. In both session types the majority of the evaluative utterances were positive, usually related to the task.

Self-maintaining utterances occurred infrequently in speech to SLD children and slightly more frequently with younger NH children. There were only four self-maintaining utterances in samples from integration sessions and all of these self-maintaining utterances occurred in the last session. The difference between self-maintaining in the integration sessions compared with the M5 session was statistically significant.

Thus speech to SLD children was different, in terms of the relative use of functional categories, from speech used in the M5 comparison setting. It was not the case that the target children talked to SLD partners in the same ways in which they talked to younger NH children from their own school. Differences were in the direction of greater use of "young listener" features to SLD, than to M5, partners.

7.3.5 2. Comparisons in the use of reformulations  
and repetitions between integration and M5 settings

The use of reformulations and repetitions is likely to be related to the extent to which the speaker believes that he/she shares with the listener(s) common understandings about the speech topic. One would expect, and *prima facie* evidence supported this, that for the target NH children, perceived joint understanding would be stronger with younger NH children than with SLD partners.

This impression was supported by the quantitative data concerning use of repetitions and reformulations of utterances in each setting. Overall, approximately one quarter of utterances in integration sessions were either a repetition or reformulation of an earlier utterance within the same topic (see 7.3.4.2). In contrast, these categories accounted for only one seventh of utterances in the M5 setting. (Data summarised in Table 10 and given in detail in Appendix 1, Tables 37-42). Repetitions were used significantly more with SLD than with M5 partners but the use of reformulations did not differ significantly between the two settings.

As shown in Table 10, reformulations followed by reformulations, and repetitions followed by reformulations (categories grouped) were used

significantly more with SLD, than with MS, partners. Other aspects of the use of reformulations and repetitions (use of successive repetitions and reformulations followed by repetitions, reformulations involving either a shortening of the utterance, and reformulations involving lengthening the utterance) showed no significant differences between the two types of partner.

Table 10: Mean percentages, standard deviations and paired t-tests (2-tailed) for use of reformulations and repetitions in amended 50U samples of discourse from integration and MS settings.

	* Integration	MS	Paired t test (2 tailed) (d.f.=8)
Reformulations	11.1%(5.1)	7.1%(6.2)	t= 0.81, NS
Repetitions	11.1%(4.3)	4.7%(4.1)	t= 3.27, p<.02.
Rep/rep + ref/rep	4.6%(3.3)	1.8%(2.3)	t= 1.88, NS.
Ref/ref + ref/mod	4.4%(2.8)	0.9%(1.5)	t= 3.10, p<.02.
Reformulations- shorter utt.	4.8%(2.7)	2.9%(3.2)	t= 1.63, NS.
Reformulations- longer utt.	4.4%(2.0)	3.4%(3.8)	t= 0.67, NS.

s.d. figures given in parentheses

\* Grouped, data derived from Appendix 1, Tables 37-42.

7.3.5.4 Exchanges between target NH children and partners in integration and M5 settings. (Based on total recorded discourse, excluding that from CA).

Talk in the integration sessions was heavily dominated by NH children and there were only 240 utterances by children with SLD in eleven integration sessions (see 7.3.4.3). By comparison, in the single M5 session there were 309 recorded utterances by M5 partners.

M5 children initiated more conversational topics with, and received fewer responses from, target NH partners, than did children with SLD (details in Table 11).

Successful dialogue might be regarded as that which involves a sequence in which each member responds to the other until the speech topic is exhausted. From this point of view dialogue between the target NH children and children with SLD was significantly more successful than talk involving NH four and five year olds (examples given in Table 12). 37.9% of utterances by children with SLD were responses to the NH partner which were followed up with a response by the NH partner. This compared with 28.2% of utterances by M5 children which were of a response type and were succeeded by a response from target NH children.

Table 11: Numbers and percentages of utterances, by children with SLD, and by M5 partners, which were received by target NH partners, with an initiation, a response type (i.e. a response, or a response plus initiation, or a response plus possibility of initiation), or no response.

<u>Utterances by children with SLD</u>					
followed by target child:	initiating speech topic		responding to target child		Total
	no	%	no	%	no %
initiating new topic	20	8.3	70	29.2	90 37.5
giving response type	24	10.0	91	37.9	115 47.9
making no response	12	5.0	23	9.6	35 14.6
Total	56	23.3	184	76.7	240 100.0

<u>Utterances by M5 children</u>					
followed by target child:	initiating speech topic		responding to target child		Total
	no	%	no	%	no %
initiating new topic	37	11.9	34	11.0	71 23.0
giving response type	69	22.3	87	28.2	156 50.5
making no response	46	14.9	36	11.7	82 26.5
Total	152	49.2	157	50.8	309 100.0

Table 12: Examples of main types of exchange  
(all taken from discourse involving EL)

initiation by SLD child - I be nurse [in dressing up game]  
 > response by EL - You want to be a nurse? D'you want to?  
 > no verbal response from SLD child  
 .....  
 initiation by M5 child - Baby want to go walk now  
                                   [playing with dolls]  
 > response by EL - Well he can't cos these are going to  
                                   school  
 > response by M5 child - Well he's going for a walk  
 > response by EL - Mummy'll have to take him  
 -----  
 initiation by EL - D'you want to take it [hat] off [in  
                                   dressing up game]  
 > response by SLD child - Take it off  
 > response by EL - Take it off?  
 > response by SLD child - No  
 > response by EL - Put it back?  
 .....  
 initiation by EL - Girl or boy? [holding up doll]  
 > response by M5 child - A girl  
 > response by EL - No it's a boy



## 7.3.5.5 Tutoring.

Tutoring strategies to SLD partners have been examined earlier (7.3.4.4) and illustrated with CL's talk to a child with SLD. Similar strategies were found in use in the single M5 session as with SLD partners. A difference arose from the greater contributions to the dialogue of M5 compared with SLD children. This is illustrated in CL's tutoring with his M5 partner (NN). An extract from this is given below. During this exchange the children were drawing, no specific instructions about what to draw had been given.

[Time in minutes:seconds from start of recording]

- | NN                  | CL                           |
|---------------------|------------------------------|
| 1. 02:30            | Let's do some <u>animals</u> |
| 2. Can't do animals |                              |
| 3. 02:45            | <u>I'll</u> help you         |
| 4.                  | I'll help you                |
| 5. 03:00            |                              |
| 6.                  | Let's do                     |
| 7.                  | Let's do                     |
| 8. 03:15            | Dog                          |
| 9. Doggy            |                              |
| 10. Brown doggy     |                              |

11. I got a brown doggy
12. 03:30
13. 03:45 [NN drawing]
14. 04:00
15. Do his legs
16. Like this
17. 04:15 Like sticks
18. Going down
19. Got it?
20. 04:30 ?like mine
21. No
22. I'll help you
23. Give it here
24. 04:45
25. 05:00 [drawing]
26. There
27. Nice long legs he got,
28. ain't he?
29. 05:15 My doggy's got
30. white bits on
31. his legs
32. 05:30
33. 05:45 [drawing]
34. Here
35. You do the next bit
36. 06:00
37. 06:15 That OK?
38. That's good

39. That's very good
40. 06:30
41. Do the next bit
42. His head and that

This conversation continued in a similar vein for at least the following 12 minutes when the tape ended.

Comparisons with the extract of CL's talk to a boy with SLD (given in 7.3.4.4) show that many of the same tutoring features occurred in both extracts. For example, both contained an opening orientation to the task (line 1), positive feedback (lines 21, 30 and 31), explicitness about what the partner had to do (lines 15, 17, 18, and 42), dividing the task into small steps (lines 15 and 42) and tonal cues were used for emphasis (lines 1, 3, 31 and 32). In both extracts the vocabulary was appropriate for the partner.

Some differences between the two, suggest appropriate adjustments to the two different types of listener. Tonal cues were used more strongly with the SLD partner, the SLD child's name was used to sustain his attention (CL knew NN's name and used it once prior to this extract). An interesting difference between CL's talk, as indicated in these extracts, to SLD and M5 partners is that whereas CL emphasised to his SLD partner "You help me", in the M5 session, CL stressed

that he was helping his five year old partner. This supports the higher use of self-maintaining utterances in M5, compared with integration, sessions. Unlike talk in integration sessions, there was no reporting about the joint task to an adult in this extract (or in talk with M5 partners by any of the target NH children). Similarly, in talk by target NH children in M5 sessions the joint nature of the activity was not stressed.

A marked difference between talk with the two partners is that the M5 child (NN) made a number of contributions to the dialogue whereas the SLD child made no vocalisations. In the M5 session CL briefly acknowledged some points made by his partner (lines 3 and 38) but did not pursue comments made by NN when they opened a conversational topic (lines 11 and 29/30/31). NN did not, as some SLD children did, try to assert himself. A similar lack of assertiveness was found in other recordings in the M5 session. This contrasted with the behaviour of some SLD children who did try to assert themselves and resist dominance by target NH children (noted in 7.3.4.5).

CL talked more to his SLD partner than to the younger NH child. The four minutes of the above extract contains 22 utterances by CL. By comparison, in nearly two and a half minutes of talk in the earlier extract (7.3.4.4) of talk to his SLD partner, CL made 28 utterances.

It was noted earlier (7.3.4.5) that motherese featured in talk by the target NH girls to SLD partners. This did not occur in talk to M5 partners, in spite of the use of, for example, diminutives, by M5 children (as in NN's use of "doggie", lines 9, 10, 11 and 29).

Results have been presented about the nature of NH six and seven year olds discourse with children with SLD and comparisons presented with talk by the same NH children partnered with younger NH children. The following section discusses these results within the framework of the research questions posed in the introduction to this study.

#### 7.4 DISCUSSION

This study set out to investigate the nature of discourse between six and seven year old NH children and peers with SLD. I shall begin by considering characteristics of talk by NH children to SLD partners, and in particular, whether this talk contained features characteristic of talk by NH children to younger NH children. Discussion will then focus on whether, and if so, how, NH children adjusted talk to individual SLD listeners and how the discourse reflected the context of NH-SLD interaction.

##### 7.4.1 Characteristics of NH children's talk with SLD partners

The children with SLD were reported to be at linguistic and cognitive levels of around three years, with social abilities at a slightly more advanced level (c. four years); that is, in general, they were developmentally about three years younger than their NH partners. Talk to SLD partners contained many of the characteristics of speech, noted in the research literature (Chapter 3) as typifying children's speech to younger children. These features included relatively few questioning, monitoring or self-maintaining utterances; a proportionately high use of requests, and moderately

frequent repetitions and reformulations. (See Lewis (1987) for comparisons with talk to classmates.) The results from the present study indicate that there are strong similarities between talk to developmentally young, and talk to chronologically young, listeners.

The use of "young listener" features shows that children with SLD were, in spite of their normal physical size for chronological age, addressed as much younger than their years. Comparisons with the NH children's talk with M5 partners (summarised in Lewis and Carpenter, 1988) suggest that, if "young listener" features operated on a continuum, SLD children were addressed as if they were even younger than four to five years old. In view of this, it is interesting that NH children estimated chronological ages of SLD children to be around five years (6.3.4.3), that is, similar to the chronological ages of M5 partners. NH children's intuitive adjustments in talk to SLD partners were more appropriate for their actual, than their hypothesised, developmental levels.

Consistent with the greater use of "young listener" features, was the more frequent incidence of "dominance" linguistic strategies (as indicated by, for example, the use of motherese, threats, reprimands and speaking for the partner) in NH children's talk to SLD, compared with M5, partners. This reflects Goodwin's (1987) point that dominance features are both an indicator of dominance and a testing out of this.

Goodwin's point is supported by examination of occasions when SLD children tried to assert themselves. This happened particularly with NH children (e.g. SH) who were very dominating.

This leads to consideration of how attitudes and discourse were inter-related. Correlations between use of particular discourse features (e.g. repetitions) and explanations given of SLD (e.g. deafness) have not been made because of the complexity of the determinants of discourse style. For example, use of repetitions may reflect the developmental level of the speaker (use of repetition has been found to precede reformulations), the behaviour of the listener (for example, inattentivity) and features of the context (for example, modelling of adults' talk). However, there are some indicators of possible discourse-attitude links arising from this study (and Study 2). They raise questions which will be introduced here and considered again under directions for further research.

First, several NH children described children with SLD as being young and those NH children also used relatively high proportions of "young listener" features, including motherese, with SLD partners- were these two facts related directly? Second, SLD children made relatively few interpretable utterances although when these did occur NH partners tried to respond to them. Was the lack of speech by SLD children related to NH children's belief that the children with SLD were



deaf? Third, SH was the only child to have evolved a crude notion of mental handicap, was this reflected in the particularly dominating style of talk, including threats and reprimands, that she used with SLD partners?

The findings from the present study support the results obtained by Guralnick and Paul-Brown (1977, 1980, 1984) and show that NH children were reacting to the relatively young developmental levels of SLD children, in spite of the normal size for chronological age of children with SLD. The results extend the work of Guralnick and Paul-Brown in several ways. First, the present study provides evidence about changes in verbal interaction between NH and SLD children over a year of integration sessions. Second, these results are based on data collected in a field, rather than laboratory, setting. Third, the study reported here focused on slightly older children than those in Guralnick and Paul-Brown's work and fourth, the study took place in a British, rather than United States, context.

#### 7.4.2 Adjustments of talk by NH children for individual SLD children

Talking to SLD peers as if they were younger children shows a broad sensitivity to the linguistic needs of those children. Greater levels of linguistic and cognitive skills are needed to differentiate styles

of address to different SLD children; that is, to individualise talk to particular listeners taking into account the variety of unusual and idiosyncratic features displayed by individual children with SLD. This requires a flexibility in using language; responding to responses, or lack of them, from partners as they occur. Guralnick and Paul-Brown's work (1984) indicates that five year old NH children did not differentiate speech to listeners with mild, moderate or severe learning difficulties.

Sensitivity to individual SLD listeners may be assessed in two ways. First, by examining the statistical evidence for effect of identity of SLD partner on the use of major discourse features; and second, by scrutinising the "flow" of NH-SLD discourse.

Identity of SLD partner did not have a statistically significant effect on the use of major discourse features. This shows that particular SLD children received different styles of talk from different NH partners over the integration sessions. It was not the case that particular NH children sustained a particular discourse style across SLD partners, but there was some evidence of systematic changes over time. However these results need to be interpreted with caution. First, the numbers of NH and SLD children were small; different results may have been obtained had larger numbers of children been involved and so provided

a data pool less sensitive to distortion by individuals. Second, although the statistical analysis used overcame the problem of confounding among the independent variables, no statistical procedure (parametric or non-parametric) can deal with the possibility that the results would have been different if alternative NH-SLD pairings occurred. The children chose their partners (see 4.2.3) so that it is reasonable to expect that the results should generalise to similar situations in which NH children choose SLD partners. It is however possible that the results would differ if partners were allocated on some different basis, for example, if they had been determined by the teachers.

One interpretation of the absence of significant effects for identity of SLD partner is that the SLD children were similar in terms of their linguistic needs. In that case it would have been inappropriate for NH children to differentiate speech to various SLD partners. However, the diverse aetiologies of SLD, the presence of secondary handicaps, such as hearing impairments, for some of the SLD children and differences between the children with SLD in their responsiveness to NH speakers, suggest that the SLD children were not homogeneous in their linguistic needs. Therefore uniform types of address to different SLD

partners would have been inappropriate for some listeners.

A second interpretation of the absence of statistical significance for identity of SLD partner is that this reflects the confounding effects of developmental changes in NH and SLD children over the period of the integration sessions. Study 2 showed that NH children's understanding about SLD changed over the year. Durkin (1986) has commented on the complex interaction of speaker, listener and contextual factors in shaping discourse:

One recurring finding in the various studies of children's ability to participate effectively in peer discourse is that in addition to developmental changes... there are individual differences within age bands and different interactants evoked different verbal behaviours...The peer status and personality characteristics of his or her co-conversationalists can influence a given

child's verbal strategies and (that) these factors continually interact with the developing abilities, and goals of the child, leading to a bootstrapping process whereby development and social context generate continually shifting feedback and needs, and thus catalyse further development and altered social context and so forth. (Page 22).

This bootstrapping process is likely to have been happening throughout the integration sessions, reflected in both a lack of statistical significance for use of major discourse features and a changing understanding about SLD (as shown in Study 2). Consequently it may be more fruitful to examine NH children's sensitivity to the linguistic needs of individual SLD children by considering how repetitions and reformulations were used by NH children in talk with SLD partners. Successful communication by NH children to SLD partners required that within the continuing discourse NH children: were sensitive to responses, or lack of them, from SLD partners, recognised the need to adjust speech, and possessed the communicative competence to make appropriate adjustments.

### Sensitivity to SLD partners' responses

The NH children in the present study made considerable efforts to sustain communication with SLD partners. This is shown by both the high proportion of reformulations and repetitions that occurred within speech topics (7.3.4.2) and the few initiations by SLD partners which received no response from NH partners (7.3.4.3). Thus, within NH-SLD interaction, the NH children worked to sustain the interaction even though (as shown in Study 2) SLD partners were seen as very different from themselves. Persistence at communicating with partners was stronger when NH children addressed SLD partners than when the NH children interacted with younger NH children. This may have been because utterances by SLD partners were relatively infrequent and were taken "seriously" by NH children.

One might anticipate that, if the NH children in the study reported here were sensitive to the needs of the listeners, then NH children would have used recurrent sequences of reformulations within speech topics as they tried to work out the ways in which an utterance needed to be phrased for it to be understood by particular SLD partners. This sequencing of reformulations was not found to be a frequent feature of talk by NH children to SLD partners. It was also not the case that reformulations were used more in earlier than in later sessions, as might be expected if NH children

had worked out in early sessions optimum phrasings for SLD partners. The proportion of utterances which were reformulations was higher in integration sessions (grouped) than in the MS session but there was no consistent trend of increased/ decreased use of reformulations over time.

The NH children in the study reported here reformulated utterances to SLD partners more frequently than did the five year old NH children in Guralnick and Paul-Brown's (1984) work on NH-SLD speech. This difference may be due to the focus on reformulations in only "failed request sequences" in the latter work. It is not clear if "failed request sequences" included all, or only a sub-set, of the reformulations whereas in the present study all reformulations in the amended 50 utterance samples have been examined. More importantly, the NH children in this study were older than those in Guralnick and Paul-Brown's research. This is likely to be significant if, as Romaine (1984) and Robinson and Whittaker (1986) suggest, the early school years are the period in which communicative competence, including the use of reformulations, is developing.

Types of reformulation may indicate whether or not NH children were adjusting linguistically to children with SLD. The main types of reformulation (focusing or simplifying utterances) were appropriate for SLD listeners and may be seen as more appropriate than the addition of information, cited as a strategy used by five

year old NH children to SLD partners in Guralnick and Paul-Brown's work (1984). In general, reformulations did indicate a sensitivity to what was appropriate for SLD listeners and there were few instances in which the speech topic was extended in a reformulation. Some lengthening of utterances in reformulations, while giving the SLD partner more to process, may have been accompanied by gestures which clarified the purpose of the utterance. This cannot be ascertained as interaction was studied using only verbal measures in Study 3.

Recognition of the need for fine adjustments in talk

Light (1987) has argued that it is the perception of the need to adjust talk to the listener, rather than the capability to do this, which is crucial in developing communicative competence. This view would suggest that similarities in talk to different SLD partners, were lapses in recognising a need for linguistic adjustment to partner rather than an inability to do this. Research by Swann (1978) has indicated that even adults addressing SLD children, did not adjust speech and teaching strategies to the needs of individual pupils. If adults, presumably well able to adjust speech appropriately, have these lapses then it would be unsurprising if children of six and seven were not similarly "forgetful".

Examination of examples of apparent lapses in



adjustment of talk to partner may show whether NH speakers lacked the capability to adjust speech, or whether, as Light (1987) argues, it was a failure to recognise that the message had not been understood. The following excerpt (from session 5) of CL's talk illustrates several points when, judging from spoken communication, CL needed to be more clear to his SLD partner (T) about what he meant. This segment of discourse lasted 30 seconds, during this period the two children were making a puppet from fabric.

1 There.

No vocalisation 2 Hold it there.

from SLD ..... 3

partner Now put it in there.

throughout. 4 No not there.

5 Down there.

6 In there.

\*\*\*

7 Around

8 That way.

\*\*\*

9 There.

10 Hold it there.

11 Come here.

12 Hold it there.

13 And then put it in.

14 There.

15 Done it.

This short extract contains, in 15 utterances during 30 seconds, a large number of deictic terms which presumed a high degree of common understanding with the partner about the task. T made no vocalisations during this period and there is some evidence (line 4) that he was not understanding the instructions. Observation notes indicated that "There" (lines 3, 4, 5, 6, 9, 10, and 13) referred to several different places or (lines 1 and 14) to denote "Finished". Similarly "It", (lines 2, 3, 10, 12, 13 and 14) was used to refer to several different items; for example, the puppet in line 2, a particular piece of fabric in line 3 and the tail in line 10. CL may have been supplementing reformulations with gestures but the only occasion on which these were observed during this piece of talk was at line 5. CL's reformulations of utterances on many other occasions, supports Light's (1987) point.

"There" and "It" were used extra-linguistically to refer to features present in the situation. This was a characteristic of talk by all the target NH children and is consistent with developmental work on communicative competence (Romaine, 1984; Wood, 1988). (Interestingly this feature was relatively infrequent in the talk of M5 partners.) The intralinguistic use of deictic terms develops at around age seven. However, there were very few examples of this in NH children's talk to SLD or M5 partners. It is not clear whether the infrequency of use of deictic terms for intra-linguistic

purposes reflects target NH children's lack of fluency in this or whether they had this ability but chose not to use it with "immature" listeners.

The reasons for CL's failure to reformulate utterances in the above extract may be explained by Robinson and Whittaker (1986). They note that young children do not recognise that an utterance has not been understood unless this has been made explicit to them. When SLD children gave no response to NH speakers (a frequent occurrence, as in the above example of CL's talk) the NH children lacked indications that utterances had not been understood. This may also explain apparent insensitivity to the linguistic needs of hearing impaired partners (Vandell and George, 1981).

A feature of the situation is likely to have exacerbated this. Ervin-Tripp and Gordon (1986) show that children are more likely to reformulate utterances when the listener is not expecting an instruction. However, in NH-SLD interaction NH children were always the tutors and SLD children the tutees. This relationship was sometimes emphasised by adults who reminded NH children that they were to show, or tell, their SLD partners what to do. Thus, the NH children were likely to have been expecting the SLD children to be prepared for instructions.

Against this, one feature of the context may have encouraged the NH children to reformulate utterances. This was the misbehaviours of children with SLD. The

distractibility and misbehaviours of children with SLD in general (1.3.2) and specifically those involved with NH children in Studies 2 and 3 (6.3.2 and 7.3.4.5) may have meant that NH speakers received clear non-verbal signals from the children with SLD that a message had not been understood. Distractible SLD partners gave their NH tutors feedback that messages were not being acted upon. However, if NH tutors did not attribute this failure to learning difficulties then non-compliance may have been attributed to other factors, for example, boredom or the simplicity of the task (see for example, EL's interview comments 6.3.2 page 109). In those cases the NH children may have regarded reformulation or repetition of utterances as inappropriate (e.g. because the SLD child wouldn't hear) or not worthwhile (e.g. because the SLD child had "bad brains").

The ability of all the NH children to reformulate utterances appropriately to SLD partners on some occasions combined with the failure to do this at other times supports Light's (1986) argument that failed communication reflects the young child's insensitivity to the need to adjust talk rather than an incapacity to do this. The higher use of reformulations with SLD than with M5 partners may support this point of view. Failure by NH children to recognise the need to reformulate utterances to SLD partners may have arisen from the tutoring context as well as from misconceptions about the nature of SLD (found in Study 2).

Ability of NH children to make fine adjustments  
in talk with children with SLD

If NH children did recognise that communication had failed and that some adaptation was needed, the NH children then had to be able to make this adjustment. The use of repetitions and reformulations within speech topics shows how some children recognised, and acted on, the need to adjust talk to individual SLD partners. Some NH children showed considerable sensitivity to SLD partners and reformulated (or less appropriately, repeated) utterances until they had been acted upon.

For example: EL (session 9, paired with S)

(Looking around the classroom for coloured  
segments from a jigsaw puzzle)

- 1 Ah! Come here
- 2 Come round here
- 3 [EL looking under table for jigsaw
- 4 piece]
- 5 No
- 6 Say "no"
- 7 Oh no none there
- 8 [EL moving away, S stopping]
- 9 Come here
- 10 Come on then
- 11 [S climbing on to a table]

12 1.30: S stop it  
13 [EL looking on top of cupboard]  
14 Come on S up here  
15 S up here  
16 S come  
17 [S climbing on to a table]  
18 S not (on there)  
19 Come and have a look  
20 Come on S now  
21 1.45:  
22 S

In this extract EL made a large number of reformulations in a short period. Initial instructions (lines 1, 5, 6, 9, 12, 14, 18 and 19) were not repeated in spite of S's non-compliance but were reformulated at least once. As the initial instructions often related to actions by S, EL had immediate feedback from S that instructions were not being acted upon. This extract shows that EL was able to adjust phrasing when necessary. On another occasion she repeated or reformulated one utterance nine times before turning to a new speech topic. In the above extract EL often used S's name as an attentional and used reformulations to add emphasis to part of an utterance. Both of these were appropriate strategies to use with her partner.

However, at one point EL may have confused S. EL had told S not to climb on to a table but shortly after

this (line 14) EL, urging S to look for a piece of the jigsaw on top of a cupboard, gave the ambiguous instruction: "Come on S up here". S climbed on to the table again soon after this (line 17) and may have misunderstood EL to mean "Climb up here". EL's earlier reprimand had not specified what was unacceptable about S climbing up, for example, whether any climbing on to tables in the classroom was wrong, or whether it was just climbing on to a particular table which was not allowed.

The extract given above of EL's talk to her partner illustrates two further points. First, that reformulations by NH children to SLD partners were predominantly of an appropriate type in the light of the linguistic abilities of SLD children. The most frequent types of reformulations were shortening the utterance, generally by omitting non-essential elements or focusing the meaning of the utterance more clearly, for example, by substituting a deictic term with a noun. Second, the easiness of the task, for EL, may have prompted a high use of reformulations. Work by Lloyd (1982), in a study of four year olds tutoring same-age children, shows that failures of communication were greater when the child tutors tried to teach a relatively difficult task (for them) compared with the teaching of a relatively easy task. Failure of communication seems likely, although this is not specified by Lloyd, to be

associated with insufficient use of repetitions and, particularly, reformulations.

Thus there are a number of factors that explain the relatively high use of reformulations and repetitions with SLD, compared with MS partners. These factors include a sense of the differentness from self of SLD partners (shown in Study 2), non-verbal cues (notably misbehaviours) that SLD partners had not understood/ acted on a message, and the relative ease of the tasks for NH children. The role of NH children as tutors to SLD partners was raised earlier as possibly contributing to NH children's lack of reformulations when these were needed. The tutor role is associated with particular types of language. Another aspect of linguistic sensitivity to partner concerns the use of specific tutoring strategies.

#### Tutoring strategies

The children engaged in the study reported here were recorded while carrying out roles as tutors (NH children) and tutees (children with SLD). Although the expressed aims of the integration project by staff at the two schools involved, emphasised mutual cooperation between NH and SLD children (Carpenter et al., 1988) in practice NH children took on more dominant roles. These roles were reinforced by adults who often reminded NH children of their positions as tutors. Therefore it



is pertinent to include in discussion of how NH children addressed SLD partners, points related to talk as child tutors.

The tutoring of children with SLD placed NH children in a position which they were unlikely to have experienced previously. While the NH children in the study reported here (several of whom had younger siblings) may have tutored those children or classmates, the SLD children presented a different type of tutee, often non-compliant and presenting conflicting size/ability cues to the child tutor. In addition, the misconceptions held by NH children about the nature of SLD (expressed in attitude interviews, Study 2) may have led them to use, at least initially, inappropriate tutoring strategies.

Did NH children tutoring SLD partners use similar strategies to those found in peer tutoring contexts by other researchers? All the NH children in the study reported here showed an understanding of the tutoring "script", some children were particularly skilful in using these tutoring strategies on many occasions. This was shown in both talk to SLD, and M5, partners. An understanding of the tutoring "script" was illustrated through, for example, a "step by step" instructional strategy, a characteristic of all the NH tutors in this study with both SLD and M5 partners. Such an approach appeared to be effective in sustaining the attention and appropriate behaviours of the children with SLD. It may

be the case that tutoring of children with SLD reinforced a "step by step" teaching style. Phillips (1987) suggests that this is a poor tutoring style and if it is ineffective for other types of tutee, the NH children may have been developing a teaching style that would not promote learning in other peer tutoring contexts.

Another feature of effective tutoring among NH children is the use of prompts (Warton and Bussey, 1988). These occurred little in NH-SLD discourse and decreased significantly over time. Did this decline represent a decrease in a "good" tutoring strategy, or an increase in a more suitable, for SLD partners, direct approach? It seems likely that the latter is the case as the few examples of prompts in the recorded NH-SLD discourse received no response from SLD partners. Similarly, Cooper et al. (1980, 1982) and Lloyd (1982) suggest that didactic settings in which one child is dominant (as in NH-SLD interaction in Study 1, and the study reported here) is less effective in promoting learning in the tutee than cooperative contexts. It seems that the "rules" for effective NH-SLD talk may differ from those for successful peer tutoring among NH children.

A third feature of a tutoring script, found in children of age eight upwards, is the providing of orienting opening remarks. This was used by several of the NH children when teaching SLD or M3 children

(illustrated in CL's talk, see extracts in 7.3.4.4, page 208 and 7.3.6.5, page 237). The relatively young age at which this was found in the study reported here may be an indication that the NH-SLD dyads provided a basis for accelerating development of tutoring skills. This point will be considered further later (8.2).

A fourth feature of successful tutoring is the giving of feedback. Some of the NH children in the present study provided explicit feedback to SLD partners. The NH children were not, in recordings, told explicitly by adults to provide feedback to SLD partners. Some United States projects involving NH children tutoring children with special needs have included explicit teaching of the tutors in techniques such as giving prompt and positive feedback to tutees (for example, Kohl et al. 1984). It is not clear how the NH children who provided clear feedback to SLD tutees had acquired this skill. They may have been modelling family members, friends or teachers.

The discourse between NH children and SLD/MS partners indicated that the NH children were acquiring a script for tutoring, using strategies such as an opening orientation to the task, appropriate pacing of instruction and giving feedback.

In general, speech by NH children was appropriate for SLD listeners but when considered in detail it was often not sufficiently fine-tuned to individual SLD partners to sustain communication. The lack of fine-tuning may have reflected misunderstandings about the nature of SLD. Ripich and Spinelli (1985) suggest that for most NH children the effort of communicating with peers with learning difficulties is not worth the extra effort required. The discussion of findings from the research reported here concerning characteristics of talk by NH children to SLD peers indicates that these NH children did work at sustaining communication even though their utterances were not always the most helpful for the recipient. Attention will now turn to an examination of the limitations of the present study.

#### 7.4.3 Limitations of the study

##### 7.4.3.1 Setting

The naturalistic setting provided data about NH children's competence in talk to SLD and MS partners. It was not intended to show the kinds of language that NH children in cross-age dyads could produce. This is both a strength and a weakness of the study. It is a strength because it has shown how NH children talk to SLD classmates in an integrated classroom but it is a weakness in that it may have led to under-estimations of what the NH children could have produced. A highly structured laboratory setting in which children were placed in test situations specifically designed to elicit (for example) types of reformulations may have produced different results from those found in the study reported here.

The findings from the present study are based on analyses of discourse collected in one highly specific setting. The discourse may not be typical of talk by young NH children to SLD partners in a wider range of situations, including, for example, unstructured classroom situations and contexts outside the classroom. However, as the prominent features were those found in a diverse range of children's talk to "young listeners" (see Chapter 3) it is likely that the broad features of

the discourse (for example, use of repetitions and requests) would be found in other NH-SLD contexts.

#### 7.4.3.2 Samples

Numbers of children in the three groups (target NH children, children with SLD and M5 children) whose language was recorded and analysed in the present study were small. This limits the generalisability of results and indicates that further studies are needed to confirm findings.

The results from the M5 session need to be treated with caution as only one M5 session took place. The M5 session took place after the integration sessions and consequently differences between NH-SLD discourse and NH-M5 discourse may be due to the linguistic development of target NH children. It is not possible to assess this as no baseline M5 session was held prior to integration sessions. Experiences of discourse with SLD partners may have explicitly developed communication strategies of NH children, the benefits of which emerged in talk with M5 partners. This is speculation and was not a focus of the research.

Results concerning NH-SLD discourse have focused in part on results for target NH children as a group. This masks the heterogeneity of their partners, i.e. the children with SLD, and this has been acknowledged in the examination of extracts of the discourse in particular

NH-SLD dyads.

#### 7.4.3.3 Method of recording discourse

Discourse was recorded using micro-recorders in jackets worn by target NH children. The jackets and recorders were only worn in integration and M5 sessions. The validity of the findings would be questionable if the method of recording influenced the nature of the discourse. This seems unlikely as the NH children seemed unconcerned by the recorders and there were only two recorded references to them by target NH children. One instance occurred in the M5 session when a five year old NH child wanted to put on a jacket, her partner (LA) replied that "They're only for us [i.e. target NH children] for [Special School]". The only recorded reference to the micro-recorders during integration sessions was by JD who, when in the washroom during the fourth session, looked in the pocket of his jacket and said "The light's on" but was apparently unconcerned. The uninhibited nature of talk between target NH children, particularly in the washroom (for example, LA's collusion with SA in the eighth integration session) suggests that the children were not disturbed by wearing the recorders.

#### 7.4.3.4 Coding of discourse

Several aspects of the discourse were systematically coded and statistical analyses based on these codings. There are two separate problems concerning this process. First, the coding of functions of utterances entailed adults (AL and the second coder), outside the immediate context of the discourse, making inferences about the NH speaker's intentions. The use of observation notes and presence of one coder (AL) throughout recordings minimised gross errors of interpretation. For the most part talk by NH children to SLD or HS partners was limited to a classroom tutoring context and this limited the likely range of utterance functions.

A second problem concerning codings of discourse features concerns the number of categories within any one classification. A large number of codings within one category (for example, discourse functions) increases the likelihood of statistical procedures leading to spuriously "significant" results. Conversely if there are relatively few sub-categories then significant features may be masked. Attempts to counter these two problems in the present study led to the basing of classifications on published systems validated in other research involving young children. This was not however possible with the classification of reformulations which arose directly out of the present study.



#### 7.4.3.5 Focus

Data collection and analyses focussed on the NH children. The verbal contributions of children with SLD were examined within analyses of exchanges and attempts by children with SLD to assert themselves. It may be argued, as evident in the earlier quotation from Durkin (1986), that discourse is an interactive process and that the children with SLD were equally important in influencing the nature of NH-SLD discourse. It is recognised that the SLD children did influence the nature of NH-SLD discourse both directly through their behaviours and indirectly through their influence on NH children's beliefs about the nature of SLD. However the research questions being asked in this study focused explicitly on NH six and seven year olds.

## CHAPTER 8

THE THREE STUDIES: CONCLUDING DISCUSSION AND  
SUGGESTIONS FOR FURTHER RESEARCH

## 8.1 CONCLUDING DISCUSSION

Arguments for integration have often been made from the viewpoint of children with special needs (e.g. Tomlinson, 1982). The supposed benefits for NH children, for example, the development of sensitivity to others, have been examined less critically. The three studies reported here set out to clarify the nature of the NH child's part in NH-SLD peer interaction. This does lead to an asymmetrical picture of NH-SLD interaction and this point is considered further later (see 8.2). Greater knowledge of the nature of NH-SLD interaction is vital given the increase in educational integration (1.1) illustrated by the projects described in these studies.

Understanding of NH children's behaviours in NH-SLD interaction is also important for the light it may shed on broader issues of children's development. Earlier (1,1) it was suggested that NH-SLD interaction may be consistent with what is already known about young children's cross-age interactions. Do the findings from the three studies reported here indicate that NH-SLD interaction is a particular type of cross-age interaction, containing features of NH-NH cross-age interactions, or that it is qualitatively different?

Two well-reported characteristics of cross-age interaction are (i) the dominance of the interaction by the senior partner in the dyad or group and (ii) a general principle that "like attracts like" in both same-age and cross-age interactions.

The different foci of the present studies: non-verbal interaction, attitudes, and discourse reveal, in varying ways, the domination of the interaction by NH children. This is illustrated in the predominance of NH children initiating interaction with, rather than responding to, SLD children; using a high proportion of requests in utterances to SLD children; and holding views of SLD children as young, prone to misbehaviours and in need of help. This leads one to consider the quality of this dominance and whether it was positive and facilitating or negative and constraining.

The quality of dominance in NH-SLD interaction is highlighted by comparing this with the NH children's

interactions with younger NH (i.e. the M5) children. One interesting contrast between NH children's talk to SLD partners compared with talk to younger NH children concerns the use of requests and questions. The former predominated in NH-SLD interaction whereas questions, an infrequent characteristic of NH-SLD talk, were relatively frequent in talk to younger NH children. This points to a difference in the type of dominance exercised by the NH children in the two contexts. Wood et al. (1986) suggest that control is exercised verbally through the use of questions. If there is a positive correlation between degree of control and use of questioning, one would anticipate more frequent questioning (although perhaps of a different type) with SLD than with M5 partners. This did not happen, suggesting that the use of questions for control requires certain contextual prerequisites which were present in NH-M5 interaction but absent in NH-SLD interaction.

The results of Study 3 indicate that there were considerable differences between individual NH children concerning the ways in which they dominated SLD partners. While some NH children (e.g. EL and LA) tended to "mother" SLD partners, other NH children were likely to be aggressively dictatorial (SH), or facilitative with tutoring styles which were responsive to the needs of listeners (e.g. KE and CL).

An interesting question concerns the interaction

between attitudes and discourse. Were the attitudes of NH children concerning the nature of SLD reflected in the ways in which SLD children were addressed? For example, if SLD was equated in attitude interviews with deafness, was this mirrored in (e.g.) a high use of repetitions? This was considered by calculating correlations between discourse features (7.3) and dimensions of attitudes (6.3.4). However these correlations were not reported as it was decided that they reflected an over-simplification: for example, a NH child's frequent use of repetitions may have reflected directly a belief that SLD children were deaf, but equally it may have reflected the developmental level of the NH child (not yet able to make reformulations quickly in response to a partner's actions) or the SLD child's behaviour (not attending). Audio-visual, rather than audio, recordings would have helped to clarify these alternatives.

It was suggested earlier (6.4.1) that Katz' (1982) framework may provide a useful basis for exploring the development of links between discourse, attitudes and behaviour. If one could establish systematically the phase of attitude development reached by a NH child this would provide a measure against which to assess discourse and behaviour. Attitudes are both the cause and effect of subsequent behaviour so that the bootstrapping process (described by Durkin, 1986, and discussed earlier in relation to discourse) occurs more

generally in NH-SLD interaction (and indeed all children's interactions). During the year of integration sessions some of these NH children had made a transition from confusion about the nature of SLD (believing SLD children to be essentially "normal" but young) to becoming more certain about the nature of SLD (e.g. "bad brains") but with this, adopting a more dictatorial (stereotypically "adult") style of interaction. In this sense, attitude change was retrogressive leading to less differentiation between SLD partners.

Integration in the school context ought to help to prevent children from developing this unhelpful style of NH-SLD interaction. Some NH children were facilitative towards SLD partners. An important question is: did this reflect "immature" attitudes in that, because attitudes had not "set" (i.e. progressed to, at least, Katz' stage six) these children still differentiated between SLD partners? Perhaps these children were at an optimum point having begun to recognise real differences between SLD children and to react to these, but not yet over-generalising about the nature of SLD. Case studies would show both the inter-relationships between discourse style and attitudes of individual NH children and how these developed over the course of interactions with particular SLD partners.

Dominance is one common feature of cross-age interactions including NH-SLD interactions. Another feature of cross-age interactions is a preference for

similar others; the "like attracts like" notion. Much of the integration research has questioned this hypothesis if "like" is interpreted simplistically as category of non-handicapped/special need. However it has been recognised (see 1.3.2) that similarity of developmental levels is important in fostering interaction. This was not tested in the present studies as no measures were made of the mental ages of individual NH and SLD children.

There was support in the studies reported here for the attraction of interactees similar to self in relation to sex of interactee. In both Studies 1 and 3, as found in other research (see 1.3.2) NH children interacted significantly more with same-sex than with opposite-sex SLD children.

A preference for interacting with children similar to the self may also account for both the decrease in NH-SLD interaction and the increase in NH children working alone, in the last of three school terms (Study 1). The developmental gap between NH and SLD partners will have widened considerably in the course of a year of integration sessions. This widening developmental gap between NH and SLD children would also lead one to anticipate greater use of "young listener" features by NH children to partners with SLD over the year of integration sessions. This did occur in relation to NH children's changing percentage use of prompts (decreasing significantly) and monitoring (initially

increasing but decreasing significantly during the last half of the year) in Study 3.

Several implications for practice arise from the studies reported here. The findings are broadly supportive of the partial educational integration of children with SLD into mainstream schools: NH-SLD interaction was comparable in frequency with child-child interaction in other school settings (e.g. Sylva et al., 1980; Galton et al., 1980); the NH children were initially, and throughout a year of integration sessions, positive about SLD classmates; and NH children generally persisted in attempts to communicate verbally with SLD children and rephrased utterances appropriately.

These supportive findings for educational integration are tempered by the evidence from the three studies of the ways in which the NH children dominated SLD partners. The consistency of this with wider developmental work on children's cross-age interactions indicates that this dominance was probably not an artefact of the specific setting. It is likely that this dominance would have been reduced if the children had been of similar developmental, rather than chronological, ages.

The salience of misbehaviours of SLD children in both, the NH children's beliefs about SLD and the talk between NH children, emphasises the importance of how adults in integrated settings respond to such



misbehaviours. To ignore or appear to condone SLD children's misbehaviours may be to encourage NH children to treat SLD children as very young. Teachers and parents with experience of handling mixed groups of NH and special needs children have reiterated the need to maintain a common behavioural code which does not involve dual standards for special needs and NH children (e.g. Byrne et al., 1988). When adults from different schools teach collaboratively in integrated settings, the classroom rules concerning children's acceptable behaviour need to be agreed clearly from the start.

The schools involved in these integration projects had begun to compile a bank of cooperative activities for NH-SLD pairs. The selection of suitable tasks proved to be more difficult than anticipated. Considerable inter-staff discussion was needed to select activities which would be appropriate for both sets of children. Many ideas were abandoned untried because they were thought likely to be too stimulating, tedious or difficult for one set of children and so would curtail NH-SLD interaction. It would be useful for practitioners involved in integration projects such as those reported here to make more widely available the details of cooperative tasks which involve genuine and complementary contributions from NH and SLD interactants.

## 8.2. DIRECTIONS FOR FURTHER RESEARCH

The three studies reported here set out to investigate the nature of NH-SLD dyadic interaction in integrated school settings. The work has clarified the nature of this interaction and has also provided some indications of aspects about which further research is needed.

One area in which further research is needed concerns the development of knowledge about SLD in young NH children. The findings from Study 2 have contributed evidence about the forms this knowledge took in a small sample of NH children. Knowledge of SLD has been presented in the context of Katz' (1982) developmental model of attitudes and a more rigorous application of this model to the development of affective attitudes and knowledge of SLD is warranted.

A cross-sectional study of knowledge of SLD in different age groups (for example, six, eight and ten year olds) analysed according to Katz' seven major stages would provide the basis for the development of an assessment instrument. The four main explanations of SLD used by NH children in Study 2 (i.e sensory/motor difficulties, young age, "bad brains" and sickness), possibly supplemented with other explanations, could be used to classify responses at each level. Particular explanations for SLD may predominate at certain stages

of development. For example, there may be a general progression through believing SLD children to be sick, replaced by SLD as sensory difficulties, in turn replaced by SLD as brain malfunction. These physical explanations may give way to a different type of explanation, for example, focusing on environmental factors (in parallel with work by Maas et al. (1978) concerning explanations for disordered behaviour).

Once such an assessment instrument had been devised and validated it would be of value both as a research tool and in evaluating the effects of, for example, various forms of educational integration. If it could be clearly demonstrated that certain types of educational integration programme were associated with positive changes in knowledge of SLD, this would be a valuable outcome and enable decisions about optimal placements to be based on evidence rather than rhetoric.

Such an instrument for assessing knowledge of SLD could also be used to explore the relationship between attitudes and discourse features. It would enable correlations between knowledge of SLD and styles of address to SLD children to be probed.

A second area in which further research is needed concerns the relationship between the development of communicative competence and talk to SLD classmates. When NH children endeavoured to sustain conversation, or just communicate successfully, with SLD partners; the

SLD children provided listeners who placed great demands linguistically on the NH speakers. The situation was conversationally very unusual for young NH children. If communication was to be effective, utterances needed to be very carefully monitored by the NH speaker, reformulated in ways which may have required several types of re-phrasing; for example, shortening the utterance, as well as making both lexical and grammatical changes. Utterances by SLD children were indistinct but they too had to be carefully monitored by the NH speakers if successful communication was to be sustained. This involved the NH child in an oral "cloze" procedure which was probably very unusual in the NH child's linguistic environment.

Talk with SLD peers provides an unusually taxing linguistic environment for young NH children. It contains the kinds of features cited by Robinson and Whittaker (1986) as important in developing communicative competence. This is probably particularly valuable when communication skills are beginning to be developed in NH children, that is six to eight years. If this is so, then NH-SLD integration in early childhood may be a particularly valuable context for the linguistic development of NH children.

A third area of research arising from the studies reported here concerns analyses of NH-SLD discourse taking full account of the roles of both parties. Such

work, including examination of verbal and non-verbal behaviours of both NH and SLD children, would show more clearly than do the present studies, how SLD children contribute to the nature of NH-SLD discourse. There are indications, in work by Wootton (1988) for example, that children with Down's syndrome are slower in making responses to offers than are NH children. How this affects discourse between the NH and children with Down's syndrome could be assessed if examination focused on the interplay of behaviours by both sets of children in naturalistic settings.

These studies have set out to explore the processes through which young NH children interacted with classmates with SLD. The findings are consistent with various strands of research in developmental psychology; in particular, work on cross-age interaction, the development of attitudes towards social groups, and styles of talk with younger children.

The introduction to this work gave, as one justification for the studies, the increase in the integration of both children with SLD into mainstream schools, and adults with SLD at community level. The NH children in these studies did not show the negative prejudices about people with SLD shown by adult members of their community when, shortly before the start of Study 1, the small semi-rural community mounted a widely-supported campaign which successfully opposed the opening of local accommodation for mentally handicapped adults.

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INTERACTION BETWEEN NON-HANDICAPPED SIX AND  
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SEVERE LEARNING DIFFICULTIES

AUTHOR

ANN LAURA LEWIS

INSTITUTION  
and DATE

UNIVERSITY OF WARWICK

1988

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INTERACTION BETWEEN NON-HANDICAPPED SIX AND  
SEVEN YEAR OLDS AND PEERS WITH  
SEVERE LEARNING DIFFICULTIES

A THESIS SUBMITTED TO  
THE DEPARTMENT OF PSYCHOLOGY  
IN CANDIDACY FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

VOLUME 2

BY  
ANN LAURA LEWIS

SEPTEMBER, 1988

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## VOLUME 2

Appendix 1:	<u>Details of Samples and Raw Data</u>	278
Appendix 2:	<u>Materials for Data Collection and Samples of Transcripts</u>	313
	Observation schedule (Study 1)	313
	Interview schedules (Study 2)	314
	Sample interview transcript (Study 2)	319
	Transcription sheet (Study 3)	327
	Transcription conventions (Study 3)	328
	Sample of NH-SLD discourse (Study 3)	329
Appendix 3:	<u>Representativeness of 50U Samples in Study 3</u>	340
References		344



APPENDIX 1: DETAILS OF SAMPLES AND RAW DATA

Table 13: Dates of sessions, location, activities, mean duration of paired activity (minutes), adults present and school base of session leaders in Study 1

	Date	Location	Activities	Mean duration of paired activities (minutes)	Adults + M	Session S leader	
Session							
<u>First phase:</u>							
1	25. 9.84	M	fabric collage	10.0	2	3	M
2	9.10.84	M	leaf printing	32.5	2	3	S
3	30.10.84	M	paper masks	No record	2	2	M
4	13.11.84	M	butterfly painting	26.0	2	2	S
<u>Second phase:</u>							
5	29. 1.85	M	fabric collage	10.5	2	2	M
6	5. 3.85	M	paper collage	24.0	1	3	S
7	19. 3.85	M	paper jigsaws	3.5	2	2	M
8	16. 4.85	M	'spatter' paintings	No record	1	2	S
<u>Third phase:</u>							
9	30. 4.85	M	object printing	15.0	2	2	M
10	14. 5.85	M	card printing	19.5	1	2	S
11	4. 6.85	M	sponge printing	17.0	2	2	M
12	18. 6.85	M	dough modelling	18.5	2	2	S

NOTES:

M - Mainstream school/adult(s)

S - Adult(s) from the special school

\* - Teachers and classroom auxiliaries, excludes occasional YTS trainees.

Table 14: Dates of semi-structured attitude  
interviews in Study 2.

Pilot studies: 11. 2.85.

26. 2.85.

18. 3.85.

1st interviews: 12. 9.85.

2nd interviews: 15. 10.85.

3rd interviews: 23. 6.86.

26. 6.86.

Table 15: Dates of sessions, location, activities, mean duration of paired activity (minutes), adults present and school base of session leaders in Study 3

Session	Date	Location	Activities	Mean duration of paired activities (minutes)	Adults <sup>a</sup>		Session leader
					M	S	
<u>First phase:</u>							
1	17. 9.85	M	string painting	26.3	2	2	M
2	1.10.85	M	paper models	18.3	2	2	S
3	29.10.85	M	leaf printing	18.0	2	3	M
4	12.11.85	S	fabric collage	18.3	2	3	S
5	21. 1.86	M	wax resist painting	26.9	1	2	M
6	4. 3.86	M	sock puppets	11.9	2	3	S
7	18. 3.86	M	no paired activity	0	2	3	M
8	15. 4.86	M	blow painting	19.9	1	3	S
9	29. 4.86	M	paper jigsaws	31.5	1	2	M
10	13. 5.86	M	P.E.1 paired push/pull activities	27.2	1	2	S
11	3. 6.86	M	"free" play (including dressing up, construction games, jigsaws)	32.6	2	2	M

NOTES:

M - Mainstream school/adult(s)

S - Special school/ adult(s)

<sup>a</sup> - Teachers and classroom auxiliaries, excludes occasional YTS trainees.

Table 16: Names, sex, dates of birth and chronological ages of non-handicapped children and children with severe learning difficulties, in Study 1.

Child		d.o.b.	C.A. in Sept. 1984 (years:months)
NH childn.	AN (f)	11. 4.78.	6: 5
	LI (f)	16. 3.78.	6: 6
	MS (f)	11. 6.78.	6: 3
	LU (f)	21. 6.78.	6: 3
	RO (f)	24. 2.78.	6: 7
	MA (m)	10. 1.78.	6: 8
	TE (m)	18. 2.78.	6: 7
	MT (m)	1. 3.78.	6: 6
	DA (m)	22. 4.78.	6: 5
	GE (m)	14. 1.78.	6: 8
SLD childn.	S (f)	28. 5.80.	4: 4
	W (f)	16.12.79.	4:10
	L (f)	25. 7.77.	7: 2
	C (f)	26.10.77.	7:11
	P (f)	19. 3.79.	5: 6
	B (m)	16. 4.78.	6: 5
	T (m)	17. 5.79.	5: 4
	Jt (m)	17. 7.75.	9: 5
	J (m)	25.11.80.	4:10
	D (m)	4. 9.80.	4: 0

Table 17: Numbers of classroom interactions in each session in Study 1 which were of NH children: interacting with mainstream adults (IMA), interacting with special school adults (ISA), initiating/ sustaining contact with SLD children (IC/SC), responding to contact from SLD children (RC), engaged in solitary behaviours (SOL), watching SLD children (W) or interacting with other NH children (INH).

Session	Type of interaction							TOTAL
	IMA	ISA	IC/SC	RC	SOL	W	INH	
1	9	3	1	0	4	1	0	18
2	7	6	3	0	31	15	0	62
3	No record							
4	2	16	13	0	16	3	0	50
5	4	1	4	0	8	2	0	19
6	2	9	9	0	17	7	3	47
7	0	0	3	0	1	2	0	6
8	No record							
9	1	2	13	2	11	1	0	30
10	2	1	13	1	16	0	0	33
11	0	3	7	1	10	2	0	23
12	2	1	7	2	23	2	0	37
Total	29	42	73	6	137	35	3	325

Table 18: Numbers of NH-SLD interactions in each session in Study 1 which were of NH children: interacting with same-sex child (SS) or opposite-sex child (OS), using verbal communication (V), using non-verbal communication (NV), giving task information (TINF), helping task management (TMAN), giving information about self (INFS), or giving personal assistance (PERA).

<u>Session</u>	<u>Type of NH-SLD interaction</u>								Total NH-SLD inter- actions
	SS	OS	V	NV	TINF	TMAN	INFS	PERA	
1	1	0	0	1	0	0	0	1	[1]
2	3	0	3	0	2	0	1	0	[3]
3	No record								
4	12	1	5	8	3	9	1	0	[13]
5	4	0	3	1	1	0	0	3	[4]
6	8	1	6	3	5	4	0	0	[9]
7	3	0	1	2	1	1	0	1	[3]
8	No record								
9	13	2	4	11	4	8	0	3	[15]
10	14	0	10	4	4	10	0	0	[14]
11	8	0	5	3	3	3	0	2	[8]
12	9	0	4	5	0	6	3	0	[9]
Total	75	4	41	38	23	41	5	10	[79]

Table 19 : Names, sex, type of sibling, dates of birth and chronological ages of non-handicapped children, Study 2.

Child	Siblings	d.o.b.	C.A. in Sept. 1985 (years: months)
LA (f)	NS	8. 8.79.	6; 1
EL (f)	YS	24. 7.79.	6; 2
SH (f)	NS	28. 3.79.	6; 6
SA (f)	YS	5. 4.79.	6; 5
CA (f)	YS	29. 3.79.	6; 6
WA (m)	YS	11.11.78.	6;10
KE (m)	NS	2. 2.79.	6; 7
JD (m)	NS	6. 2.79.	6; 7
CL (m)	NS	6. 7.79.	6; 3
TD (m)	NS	31. 8.79.	6; 1

Comparison group (from the same mainstream class but not participants in the integration project):

MX (f)	YS	19. 6.79	6; 3
DX (m)	YS	11. 8.79	6; 1
RX (m)	NS	12. 3.79	6; 6

Key: NS = No siblings  
YS = Younger siblings



Table 20. Non-handicapped children nominated by classmates as being "not very clever" or needing "a lot of help" in first and/or third interviews

<u>First interviews</u>				
	Not very clever	Need lots of help	Not very clever + need lots of help	Not named
<u>Third interviews</u>				
Not very clever	<u>WAL 1]</u>		<u>JOE 5]</u>	STE 1]
Need lots of help		<u>SAC 1]</u> <u>TIC 2]</u> <u>KAC 1]</u>	<u>TOE 8]</u>	
Not very clever + need lots of help			LEE 2] ME[11] TRE 3]	<u>CLC 3]</u>
Not named	JOE 1] JAC 2] DAC 2] ATC 2]	<u>KEE 1]</u>	<u>SHL 3]</u> ONL 2] LIC 4]	(13 other children in the class)

Note: Names of children involved in Study 2 are underlined.

Number of nominations in square brackets.

Table 21: First interviews, Sept 1985.  
re. "not very clever" classmates

	Project group:										Comparison group:		
	LA	EL	SH	SA	WA	KE	JO	CL	TO	Total	MX	DX	RX
Named:	/	/	/	/	/	/	/	/	/	9	/	/	/
ATT. TOWARDS:													
+				/	/			/		3	/		
-							/			2		/	/
Mixed		/	/			/			/	4			
DESCR:PTORS:													
Phys.	/									1			
Behav.	/	/	/	/	/	/	/			6			
Cogn.	/	/	/		/	/	/	/	/	6	/	/	/
CAUSES:													
Phys.					/					1			
Behav.	/		/	/	/		/	/	/	6	/		/
Cogn.										0			
Home		/								1			
School						/				1			
NR/DK										0			/
VOLITION:													
High				/		/	/		/	4			/
Low										0	/	/	
Mixed	/		/		/			/		4			
NR/DK		/								1			
PROGNOSIS:													
Could													
change	/	/	/	/	/	/	/	/	/	8	/	/	/
Can't				/						1			
change													

Note: NR/DK= No response/ don't know

Table 22: First interviews, Sept 1985.  
re. classmates thought to "need a lot of help"

	Project groups:									Total	Comparison groups:		
	LA	EL	SH	SA	WA	KE	JO	CL	TO		MX	DX	Rx
Named:	/	/	/		/	/		/	/	7	/	/	/
ATT. TOWARDS:													
+	/			/		/				3		/	
-					/		/	/		3	/		/
Mixed		/	/						/	3			
DESCR:PTORS:													
Phys.										0			
Behav.	/					/		/	/	4			
Cogn.		/	/	/	/			/	/	5	/	/	/
NR/DK							/			1			
CAUSES:													
Phys.									/	1			
Behav.		/		/	/	/				4	/	/	/
Cogn.										0			
Home	/		/					/		3			
School										0			
NR/DK							/			1			
VOLITION:													
High				/	/	/		/		4			
Low										0	/	/	/
Mixed	/	/	/							3			
NR/DN							/		/	2			
PROGNOSIS:													
Can						/		/		2	/	/	/
change													
Can't													
change													
NR/DK	/	/	/	/	/		/		/	7			

Note: NR/DK= No response/ don't know



Table: 23 - continued

SLD CHILDREN:									
Hard-working>	3	4	5	1	5	3	1	4	3
Happy>	3	5	5	5	5	5	1	5	5
Strong>	3	1	3	3	2	5	2	5	1
Clever>	2	4	4	2	1	4	1	3	5
Brave>	3	1	4	2	1	1	1	4	5
Fun>	2	5	4	5	5	4	5	5	5

## HELP NEEDED:

Lot			/	/			/		4
Little	/	/			/	/			4
Mixed							/		1

## SPECIAL FRIEND:

Yes/no	/	/	/	/	x	/	/	/	/
Name:	S	P	all	?		B	?	T	?
To tea	x	/	-	/	x	-	/	/	x
To stay	x	/	/	/	/	x	/	x	x
Play + in	/	/	/	/	/	-	/	/	/
playgd.									

Notes: NR/DK=No response/ don't know

/ = Yes

x = No

- = Not sure

Table 24: Third interviews, June 1986.  
re. classmates thought to be "not very clever".

	Project group:										Comparison group:		
	LA	EL	SH	SA	WA	KE	JD	CL	TO	Total	MX	DX	RX
Named:	/	/	/	/		/	/	/	/	9	/	/	/
ATT. TOWARDS:													
+		/	/			/				3			
-	/			/				/	/	4			
mixed					/		/		/	2			
DESCRIPTORS:													
Phys.										0			
Behav.	/	/	/			/		/	/	6			
Cogn.	/			/			/		/	4	/	/	/
NR/DK					/					1			
CAUSES:													
Phys.									/	1			/
Behav.	/	/	/	/			/	/		6	/	/	/
Cogn.										0			
Home		/								1			
School										0			
NR/DK					/	/				2			
VOLITION:													
High	/		/				/	/	/	5			
Low						/				1			
Mixed										0			
NR/DK	/	/		/	/					3			
PROGNOSIS:													
Can		/				/		/	/	4			
change													
Can't							/			1			
change													
NR/DK	/		/	/	/					4			

Note: NR/DK= No response/don't know

Table 25: Third interviews, June 1986.  
 re. classmates thought to "need a lot of help"

	Project group:									Total TO	Comparison group:		
	LA	EL	SH	SA	WA	KE	JO	CL	MX		DX	RX	
Named:	/	/		/	/	/	/		/	7	/	/	/
ATT. TOWARDS:													
+		/	/			/			/	4			
-	/			/						2			
Mixed							/	/		2			
NR/DK					/					1			
DESCR: PTORS:													
Phys.										0			
Behav.	/		/			/			/	4			
Cogn.	/			/	/		/			4	/	/	/
NR/DK		/						/		2			
CAUSES:													
Phys.										0			
Behav.	/	/								2	/	/	/
Cogn.	/									1			
Home					/					1			
School						/	/			1			
NR/DK			/	/		/		/	/	5	/		
VOLITION:													
High	/		/							3			
Low		/				/				2			
Mixed										0			
NR/DK				/	/		/	/	/	5			
PROGNOSIS:													
Can			/			/				2			
change													
Can't							/			1			
change													
NR/DK	/	/		/	/			/	/	6			

Notes: NR/DK= No response/ don't know





Table 26: Continued

SLD CHILDREN:									
Hard-working>	4	5	5	1	1	5	1	5	5
Happy>	3	5	1	5	5	5	1	5	5
Strong>	3	1	4	5	3	3	1	5	5
Clever>	2	4	1	5	4	5	1	5	5
Brave>	4	3	4	5	3	4	3	4	5
Fun>	5	5	4	5	5	5	3	5	5

HELP NEEDED:									
Lot			/		/		/	/	5
Little		/		/		/		/	3
Mixed	/								1

SPECIAL FRIEND:									
Yes/no	/	/	/	/	/	x	/	/	8
Name:	W	S	L	P	D	x	?	B	D
		+W							+J

To tea	/	-	-	/	/	-	x	/	x
To stay	/	-	-	/	/	-	x	/	x
Play + in	/	/	/	/	/	/	/	/	/
playgd.									

Note: / = Yes  
 x = No  
 - = Not sure

Table 27: Names, sex, relative age of siblings (target NH and SLD children only), dates of birth and chronological ages of target NH, SLD, and M5 (NH four and five year old) children involved in Study 3

Child		d.o.b.	C.A. in Sept. 1985 (years:months)
NH ("target") children:			
LA (f)	NS	8. 8.79.	6: 1
SA (f)	YS	5. 4.79.	6: 5
EL (f)	YS	24. 7.79.	6: 2
SH (f)	NS	28. 3.79.	6: 6
CA (f)	YS	29. 3.79.	6: 6
WA (m)	YS	11.11.78.	6:10
KE (m)	NS	2. 2.79.	6: 7
JO (m)	NS	6. 2.79.	6: 7
CL (m)	NS	6. 7.79.	6: 3
TO (m)	NS	31. 8.79.	6: 1
Children with SLD:			
S (f)	OS	28. 5.80.	5: 4
W (f)	OS	16.12.79.	5:10
L (f)	NS	25. 7.77.	8: 2
P (f)	OS	19. 3.79.	6: 6
K (f)	OS	28. 1.81.	4: 8
T (m)	OS	17. 5.79.	6: 4
B (m)	OS	16. 4.78.	7: 5
J (m)	OS	25.11.80.	5:10
D (m)	NS	4. 9.80.	5: 0
E (m)	NS	16. 1.79.	6: 8
X (m)		(1 visit only)	
Y (m)		(1 visit only)	
M5 comparison group children:			
			C.A. in June 1986 (years:months)
AA (f)		25. 8.82	4:10
PP (f)		6.10.81	4: 8
SS (f)		19. 9.82	4: 9
MM (f)		11. 6.81	5: 0
JJ (m)		5. 4.81	5: 2
DD (m)		12. 5.81	5: 1
HH (m)		14. 4.81	5: 2
NN (m)		22. 4.81	5: 2
TT (m)		24. 6.81	5: 0

KEY: YS - has a younger sibling.  
 OS - has an older sibling.  
 NS - no siblings

Table 28: Duration of total recording (in minutes) of discourse for each target non-handicapped child, and identity of partner, sessions not recorded, and absences in each integration and MS session.

CHILD:	LA	SA	EL	SH	CA	WA	KE	JD	CL	TO	Total
INTEGRN. SESS:											
1.	31.0 +L	27.0 +X	NR +K	NR +P	NR +S	21.0 +J	NR +D	ABS	NR +B	NR +T	79.0
2.	NR +W	NR +P	ABS	18.0 +L	NR +S	NR +J	NR +B	NR +D	15.0 +B	22.0 +T	55.0
3.	ABS	NR +P	NR +K	ABS	18.5 +S	20.0 +P	20.0 +D	10.5 +J	14.0 +J	25.0 +E	108.0
4.	ABS +B	19.0 +B	19.0 +K	19.5 +J	16.0 +S	17.0 +L	NR +E	18.5 +D	ABS	19.0 +W	128.0
5.	30.0 +W	30.0 +P	27.0 +K	30.0 +S	LS	30.0 +E	26.0 +D	30.0 +B	30.0 +T	9.0 +J	242.0
6.	NR +W	12.0 +B	9.0 +S	14.0 +D	LS	10.0 +T	12.0 +J	13.0 +E	ABS	13.0 +Y	83.0
7.											
8.	21.0 +W	18.5 +P	18.0 +S	19.5 +J	LS	20.0 +L	21.0 +K	21.0 +D	19.5 +T	21.0 +E	179.5
9.	ABS	32.0 +W	32.0 +S	28.0 +J	LS	31.5 +K	32.0 +D	32.0 +E	32.0 +T	32.5 +B	252.0
10.	7.0 +W	32.0 +P	32.5 +S	32.0 +J	LS	32.0 +L	32.5 +B	24.0 +D	27.0 +T	26.0 +E	245.0
11.	24.0 +W	32.0 +P	35.0 +S	33.0 +K	LS	28.0 +T	33.0 +J	38.0 +E	138.0 +B	ABS	261.0
Total	113.0	202.5	172.5	194.0	34.5	209.5	176.5	187.0	175.5	147.5	1632.5
<hr/>											
MS SESS	47.0 +AA	31.5 +PP	47.0 +DD	31.0 +SS	LS	43.0 +JJ	49.0 +HH	15.5 +MM	15.0 +NN	31.0 +TT	310.0

KEY: NR: Child present but no recording made of discourse.  
ABS: Child absent.

LS: Child left school.  
Recording time from switching on of the recorder as close as possible to start of paired activity to the end of either the paired activity or the tape, whichever occurred first.

Table 29: Means, standard deviations and percentages of total utterances by NH children in each session which were addressed to adults (UTA samples)

CHILD:	LA	SA	EL	SH	WA	KE	JD	CL	TO	Mean % (sd)
INTEGRATION										
SESSION:										
1.	9				0					9.0% (12.7)
	18.0%									
2.				17				13	13	29.4% (4.1)
				34.0%				26.0%	28.3%	
3.					6	2	4	9	8	18.1% (8.9)
					28.6%	4.0%	21.1%	18.0%	18.6%	
4.		5	18	10	4		10		8	52.9% (32.6)
		83.3%	52.9%	20.0%	100.0%		37.5%		23.5%	
5.	3	3	1	8	4	2	7	0	7	11.5% (13.3)
	6.0%	6.0%	2.0%	16.0%	11.8%	4.0%	14.0%		43.8%	
6.		6	1	4	0	3	0			10.0% (16.3)
		42.9%	2.0%	8.0%		6.8%				
7.										
8.	0	0	1	0	14	6	6	10	22	16.2% (20.6)
			2.0%		56.0%	12.0%	12.0%	20.0%	44.0%	
9.		5	0	0	12	0	2	0	11	7.5% (10.2)
		10.0%			24.0%		4.0%		22.0%	
10.	0	4	1	3	3	0	1	0	12	7.9% (10.6)
		10.0%	2.0%	6.0%	27.3%		2.0%		24.0%	
11.	0	1	0	0	3	0	5	1		2.7% (3.9)
		2.0%			7.7%		10.0%	2.0%		
Mean										16.5% (14.8)
%	4.8%	22.0%	8.7%	10.5%	28.4%	3.8%	12.6%	9.4%	26.3%	
(sd)	(7.8)	(30.6)	(19.5)	(12.1)	(32.1)	(4.5)	(12.2)	(11.4)	(13.1)	

Table 30: Duration of recording (in minutes) of "50 utterance" (50U) samples and numbers of utterances in the 50U samples (in parentheses) used for data analyses for each target child, for each integration and M3 session.

CHILD:	LA	SA	EL	SH	CA	WA	KE	JO	CL	TO
INTEGRATION SESSION:										
1.	22.5 (50)					20.0 ( 0)				
2.				17 (22)					14.0 (27)	21.0 (19)
3.						19.0 (13)	8.0 (50)	9.5 ( 3)	13.0 (18)	24.0 (26)
4.	18.0 ( 0)	18.0 ( 3)	8.5 (50)			14.0 ( 0)		17.5 ( 0)		18.0 (20)
5.	8.5 (50)	25.5 (50)	6.5 (50)	13.0 (50)		29.0 (29)	17.0 (50)	29.0 (36)	13.0 (50)	8.0 ( 6)
6.	11.0 ( 6)		5.5 (50)	9.0 (50)		9.0 (14)	11.0 (37)	12.0 ( 4)		
7.										
8.	20.0 (46)	17.5 (27)	14.0 (50)	10.5 (50)		19.0 ( 4)	12.5 (50)	20.0 (50)	18.5 (28)	20.0 (12)
9.	24.5 (50)		2.0 (50)	3.5 (50)		23.5 (50)	10.0 (50)	23.5 (50)	5.5 (50)	21.5 (50)
10.	6.0 (199)	31.0 (33)	10.0 (50)	5.5 (50)		31.0 ( 5)	31.5 (25)	12.0 (50)	9.5 (50)	15.0 (50)
11.	6.0 (50)	31.0 (42)	2.0 (50)	4.5 (50)		27.0 ( 7)	9.5 (50)	37.0 (19)	14.0 (50)	
M3 SESSION										
	21.0 (50)	6.0 (50)	7.5 (50)	10.5 (50)		20.5 (50)	48.0 (49)	14.5 (29)	14.0 (46)	9.0 (50)

Cells left blank denote either no recording made or child absent (see Appendix 1, Table 28 for details).

Table 31: F ratios from ANOVA (3 way) for major discourse features

Discourse feature	Table of data	Differences due to NH child df=8,37	Differences due to session df=8,37	Differences due to SLD child df=9,37
Requests ..		1.96 (NS)	3.50 p<.01	0.80 (NS)
Prohibitions ..		1.71 (NS)	1.22 (NS)	0.69 (NS)
Prompts ..		1.09 (NS)	2.65 p<.05	1.01 (NS)
Monitoring ..		0.86 (NS)	3.53 p<.01	1.09 (NS)
Questioning ..		1.02 (NS)	2.65 p<.05	1.44 (NS)
Repetitions ..		2.09 (NS)	1.51 (NS)	0.91 (NS)
Reformulations ..		0.89 (NS)	0.49 (NS)	1.33 (NS)
Rep/rep + ref/rep	..	2.25 p<.05	1.31 (NS)	1.39 (NS)
Ref/ref + rep/ref	..	1.76 (NS)	0.67 (NS)	0.82 (NS)
Reformulations .. - shorter utterance		0.54 (NS)	0.88 (NS)	1.51 (NS)
Reformulations .. - longer utterance		0.84 (NS)	0.73 (NS)	1.08 (NS)

Tables 32-42 summarise numbers and percentages of major discourse features in the amended 50U samples. The notes below apply to all tables in the sequence.

Cells left blank denote no recorded data, child absence (details of these are given in Table 28) or cell is one of four excluded from statistical analyses (see 7.3.3 page 185).

- \* - Mean percentage of utterances in sub-samples for that session (standard deviation).
- \*\* - Mean percentage of utterances in sub-samples for individual child (standard deviation).

Figures corrected to 1 decimal place.

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Table 32: Numbers and percentages of utterances by each NH target child in each integration and M5 session 50U samples which were requests, and means for each target NH child and each session.

CHILD:	LA	SA	EL	SH	WA	KE	JO	CL	TO	TOTAL
INTEGRATION										*
SESSION:										
1.	30				0					30
	60.0%									30.0%(42.4)
2.				8				5	4	17
				36.4%				18.5%	21.1%	25.3%(9.7)
3.					8	38	2	2	18	68
					61.5%	76.0%	66.7%	11.1%	69.2%	56.9%(26.1)
4.		0	3	14	0		0		1	18
			100%	28.0%					5.0%	22.2%(39.7)
5.	22	25	24	22	20	33	11	18	2	177
	44.0%	50.0%	48.0%	44.0%	69.0%	66.0%	30.6%	36.0%	33.3%	46.8%(13.5)
6.		2	32	7	1	11	0			53
		33.3%	64.0%	14.0%	7.1%	29.7%				29.6%(22.1)
7.										
8.	22	7	23	11	2	35	24	6	8	138
	47.8%	25.9%	46.0%	22.0%	50.0%	70.0%	44.0%	21.4%	66.7%	43.8%(17.9)
9.		18	28	10	17	15	19	32	21	160
		36.0%	56.0%	20.0%	34.0%	30.0%	38.0%	64.0%	42.0%	40.0%(14.1)
10.	14	18	36	38	4	20	26	20	21	197
	73.7%	54.5%	72.0%	76.0%	80.0%	80.0%	52.0%	40.0%	42.0%	63.4%(16.2)
11.	21	7	26	18	3	37	8	13		133
	42.0%	16.7%	52.0%	36.0%	42.9%	74.0%	42.1%	26.0%		41.5%(17.1)
TOTAL: 109	77	172	128		55	189	90	96	75	991
**	53.5%	30.9%	62.6%	34.6%	38.3%	60.8%	34.2%	31.0%	39.9%	42.9%
	(13.3)	(18.9)	(18.9)	(19.4)	(30.2)	(21.6)	(23.6)	(17.6)	(23.1)	(12.7)
M5.	16	5	7	15	15	11	1	13	24	107
	32.0%	10.0%	14.0%	30.0%	30.0%	22.4%	3.4%	28.3%	48.0%	24.2%(13.5)





Table 34: Numbers and percentages of utterances by each NH target child in each integration and MS session 50U samples which were prompts and means for each target NH child and each session.

CHILD:	LA	SA	EL	SH	WA	KE	JD	CL	TO	TOTAL *
SESSN:										
1.	3 6.0%				0				3 3.0% ( 4.2)	
2.			2 9.1%					5 18.5%	5 26.3%	12 18.0% ( 8.6)
3.					0	2 4.0%	0	5 27.8%	1 3.8%	8 7.1% (11.7)
4.		0	0	6 12.0%	0		0		3 15.0%	9 4.5% ( 7.0)
5.	5 10.0%	4 8.0%	7 14.0%	2 4.0%	1 3.4%	0	0	8 16.0%	0	27 6.2% ( 6.1)
6.		0	2 4.0%	11 22.0%	1 7.1%	4 10.8%	3 75.0%			21 17.3 (26.5)
7.										
8.	5 10.9%	1 3.7%	2 4.0%	6 12.0%	0	4 8.0%	1 2.0%	2 7.1%	0	21 5.3% ( 4.4)
9.		2 4.0%	1 2.0%	6 12.0%	1 2.0%	1 2.0%	0	0	0	11 2.8% ( 4.0)
10.	0	1 3.0%	0	2 4.0%	0	0	1 2.0%	1 2.0%	0	5 1.2% ( 1.6)
11.	4 8.0%	2 4.8%	0	7 14.0%	0	1 2.0%	0	5 10.0%		19 3.1% ( 3.7)
TOTAL:	17 7.0% (4.3)	10 3.4% ( 2.8)	12 3.4% ( 4.8)	42 11.1% ( 5.8)	3 1.4% (3.3)	12 3.8% (4.1)	5 9.9% (25.9)	26 11.6% (10.8)	9 7.3% (10.0)	136 6.5% (3.7)
MS.	2 4.0%	1 2.0%	1 2.0%	3 6.0%	4 8.0%	8 16.3%	1 3.4%	2 4.3%	2 4.0%	24 5.6% ( 4.4)

Table 35: Numbers and percentages of utterances by each NH target child in each integration and MS session SOU samples which were monitoring, including evaluations and means for each target NH child and each session.

CHILD:	LA	SA	EL	SH	WA	KE	JO	CL	TO	TOTAL
SESSN:										*
1.	7 14.0%				0					7 7.0%( 9.9)
2.				8 36.4%				6 22.2%	6 31.6%	20 30.1%( 7.2)
3.					1 7.7%	9 18.0%	0	1 5.6%	2 7.7%	13 7.8%( 6.5)
4.		0	0	18 36.0%	0		0		2 10.0%	20 7.7%(14.4)
5.	14 28.0%	10 20.0%	15 30.0%	21 42.0%	6 20.7%	5 10.0%	22 61.1%	8 16.0%	2 33.3%	103 29.0%(15.4)
6.		4 66.7%	10 20.0%	12 24.0%	12 85.7%	15 40.5%	0			53 39.5%(31.8)
7.										
8.	9 19.6%	11 40.7%	14 28.0%	31 62.0%	0	6 12.0%	12 24.0%	13 46.4%	4 33.3%	100 29.6%(18.7)
9.		19 38.0%	11 22.0%	19 38.0%	15 30.0%	19 38.0%	8 16.0%	8 16.0%	17 34.0%	116 29.0%( 9.7)
10.	2 10.5%	3 9.1%	1 2.0%	7 14.0%	0	3 12.0%	2 4.0%	4 8.0%	0	21 6.6%( 5.3)
11.	17 34.0%	5 11.9%	10 20.0%	14 28.0%	0	5 10.0%	3 15.8%	20 40.0%		74 20.0%(13.3)
TOTAL:	49 21.2%	52 26.6%	61 17.4%	129 35.1%	34 16.0%	62 20.1%	47 15.1%	60 22.0%	33 21.4%	527 21.7
**	(9.7)	(23.1)	(13.5)	(14.1)	(28.3)	(13.4)	(20.7)	(15.2)	(14.8)	(6.2)
MS.	16 32.0%	26 52.0%	34 78.0%	21 42.0%	21 42.0%	20 40.8%	23 79.3%	16 34.8%	18 36.0%	195 48.5%(18.0)

Table 36: Numbers and percentages of utterances by each NH target child in each integration and MS session 50U samples which were questioning and means for each target NH child and each session.

CHILD:	LA	SA	EL	SH	WA	KE	JO	CL	TO	TOTAL
SESSION:										*
1.	6 12.0%				0					6 6.0%(8.5)
2.				1 4.5%				3 11.1%	2 16.5%	6 10.7%(6.0)
3.					2 15.4%	0	0	4 22.2%	0	6 7.5%(10.6)
4.		0	0	8 16.0%	0		0		13 31.0%	21 7.8%(13.0)
5.	5 10.0%	0	1 2.0%	0	1 3.4%	1 2.0%	0	0	0	8 1.9%(3.3)
6.		0	1 2.0%	14 28.0%	0	6 16.2%	1 25.0%			22 11.9%(12.9)
7.										
8.	2 4.3%	0	3 6.0%	0	0	0	0	2 7.1%	0	7 1.9%(3.0)
9.		9 18.0%	8 16.0%	11 22.0%	12 24.0%	8 16.0%	13 26.0%	1 2.0%	5 10.0%	67 16.8%(7.9)
10.	0	1 3.0%	0	0	0	0	1 2.0%	1 2.0%	0	3 0.8%(1.2)
11.	5 10.0%	20 47.6%	8 16.0%	4 8.0%	3 42.9%	0	0	1 2.0%		41 15.8%(19.0)
TOTAL:	18	30	21	38	18	15	15	12	20	187
**	7.3% (5.0)	9.8% (17.9)	6.0% (7.1)	9.8% (10.9)	9.5% (15.2)	4.9% (7.4)	6.6% (11.7)	6.6% (7.9)	8.2 (12.0)	7.7% (1.8)
MS.	12 24.0%	13 26.0%	7 14.0%	8 16.0%	3 6.0%	7 14.3%	2 6.9%	5 10.9%	6 12.0%	63 14.5%(6.8)

Table 37: Numbers and percentages of utterances by each target NH child in each integration and M5 session 50U samples which were reformulations and means for each target NH child and each session.

CHILD:	LA	SA	EL	SH	WA	KE	JO	CL	TO	TOTAL
SESSN:										*
1.	14				0					14
	28.0 %									14.0% (19.8)
2.			0					2	1	3
								7.4%	5.0%	4.1% (3.8)
3.					0	12	0	2	4	18
						24.0%		11.1%	15.4%	12.6% (10.0)
4.		0	0	3	0		0		4	7
				6.0%					20.0%	4.3% (8.0)
5.	8	5	8	8	2	11	2	8	0	52
	16.0%	10.0%	16.0%	16.0%		6.9%	22.0%	5.6%	16.0%	12.1% (6.9)
6.		0	10	6		2	0	0		18
			20.0%	12.0%		14.3%				7.7% (8.8)
7.										
8.	4	1	7	8	0	14	3	3	0	40
	8.7%	3.7%	14.0%	16.0%		28.0%	6.0%	10.7%		9.7% (8.9)
9.		4	13	7	10	5	3	12	5	59
		8.0%	26.0%	14.0%	20.0%	10.0%	6.0%	24.0%	10.0%	14.8% (7.6)
10.	5	0	14	4	0	0	8	6	5	42
	26.3%		28.0%	8.0%			16.0%	12.0%	10.1%	11.2% (10.7)
11.	4	7	7	2	1	18	2	5		46
	8.0%	16.7%	14.0%	4.0%	14.3%	36.0%	10.5%	10.0%		14.2% (9.7)
TOTAL:	35	17	59	38	15	60	18	38	19	299
**	17.4%	5.5%	16.9%	9.5%	6.2%	17.1%	5.5%	13.0%	6.6%	11.1%
	(9.5)	(6.4)	(9.3)	(5.9)	(8.0)	(14.0)	(5.7)	(7.4)	(7.5)	(5.1)
M5.	0	4	5	9	4	6	0	3	6	36
		8.0%	10.0%	18.0%	8.0%	17.1%		8.3%	12.0%	9.0% (6.3)

Table 3B: Numbers and percentages of utterances by each target NH child in each integration and M5 session 50U samples which were repetitions and means for each target NH child and each session.

CHILD:	LA	SA	EL	SH	WA	KE	JO	CL	TO	TOTAL
SESSN:										*
1.	3 6.0%				0					3 3.0% ( 4.2)
2.				1 4.2%				6 22.2%	0	7 8.8% (11.8)
3.					2 15.4%	6 12.0%	0	7 38.9%	3 11.5%	18 15.6% (14.3)
4.		0	1 33.0%	2 4.0%	0		0		2 10.0%	5 7.8% (12.9)
5.	2 4.0%	1 2.0%	4 8.0%	4 8.0%	5 17.2%	6 12.0%	3 8.3%	8 16.0%	0	33 8.4% ( 5.9)
6.		0	3 6.0%	5 10.0%	0	6 15.4%	0			14 5.2% (6.5)
7.										
8.	1 2.1%	8 29.6%	2 4.0%	1 2.0%	1 25.0%	1 2.0%	7 14.0%	1 3.6%	1 6.7%	23 9.9% (10.6)
9.		11.0 22.0%	3 6.0%	1 2.0%	5 10.0%	1 2.0%	7 14.0%	12 24.0%	5 10.0%	45 11.3% ( 8.3)
10.	4 21.1%	6 18.2%	3 6.0%	11 22.0%	1 20.0%	2 8.0%	10 20.0%	16 32.0%	16 32.0%	69 19.9% ( 8.9)
11.	6 12.0%	4 9.5%	7 14.0%	2 4.0%	2 25.0%	5 10.0%	2 9.1%	7 14.0%		35 12.2% ( 6.1)
TOTAL:	16 9.0% ( 7.7)	30 11.6% (11.8)	23 11.0% (10.2)	27 7.0% ( 6.7)	16 12.5% (10.5)	27 8.8% ( 5.1)	29 8.2% ( 7.6)	57 21.5% (11.7)	27 10.0% (10.8)	252 11.1% ( 4.3)
M5.	1 2.0%	5 10.0%	2 4.0%	5 10.0%	1 2.0%	3 8.6%	0	2 5.6%	0	19 4.7% ( 4.1)

Table 39: Numbers and percentages of utterances by each target NH child in each integration and MS session 50U samples which were a reformulation followed by a reformulation or a repetition followed by reformulation, and means for each target NH child and each session.

CHILD:	LA	SA	EL	SH	WA	KE	JO	CL	TO	TOTAL
SESSION:										*
1.	7 14.0%				0				7 7.0% (9.9)	
2.				0				1 3.7%	0 1.2% (2.1)	
3.					0	5 10.0%	0	1 5.6%	1 13.8%	7 5.9% (6.1)
4.		0	0	1 2.0%	0		0		1 5.0%	2 1.2% (2.0)
5.	4 8.0%	0	3 6.0%	3 6.0%	1 3.4%	4 8.0%	1 2.8%	1 2.0%	0	17 4.0% (2.6)
6.		0	4 8.0%	2 4.0%	0	6 16.2%	0			12 4.7% (6.5)
7.										
8.	2 4.3%	1 3.7%	0	1 2.0%	0	4 8.0%	0	2 3.6%	0	10 2.4% (2.8)
9.		1 2.0%	5 10.0%	3 6.0%	4 8.0%	1 2.0%	2 4.0%	6 12.0%	2 4.0%	24 6.0% (3.7)
10.	2 10.5%	0	8 16.0%	1 2.0%	0	0	2 4.0%	3 6.0%	0	16 4.3% (5.7)
11.	1 2.0%	5 11.9%	5 10.0%	1 2.0%	0	10 20.0%	0	0		22 5.7% (7.4)
TOTAL:	16 7.8% (5.1)	7 2.5% (4.4)	25 7.1% (5.8)	12 3.0% (2.1)	5 1.3% (2.8)	30 9.2% (7.1)	5 1.4% (1.9)	14 4.7% (3.8)	4 3.3% (5.1)	118 4.5% (2.8)
MS.	0	0	1 2.0%	2 4.0%	1 2.0%	0	0	0	0	4 0.9% (1.5)

Table 40: Numbers and percentages of utterances by each target NH child in each integration and M5 session 50U samples which were a repetition followed by a repetition or a reformulation followed by a repetition and means for each target NH child and for each session.

CHILD:	LA	SA	EL	SH	WA	KE	JO	CL	TO	TOTAL
SESSN:										*
1.	1 2.0%				0				1 1.0%	(1.4)
2.				0				1 3.7%	0 1	1.2% (2.1)
3.					1 7.7%	3 6.0%	0	5 27.8%	1 3.8%	10 9.1% (10.9)
4.		0	0	1 2.0%	0		0		1 5.0%	2 1.2% (2.0)
5.	1 2.0%	2 4.0%	0	2 4.0%	3 10.3%	4 8.0%	0	4 8.0%	0	16 4.0% (3.9)
6.		0	2 4.0%	4 8.0%	0	1 2.7%	0			7 2.5% (3.2)
7.										
8.	2 4.3%	3 11.1%	1 2.0%	0	0	0	4	2 7.1%	0	12 3.6% (4.2)
9.		4 8.0%	1 2.0%	0	1 2.0%	1 2.0%	4 8.0%	7 14.0%	2 4.0%	20 5.0% (4.7)
10.	3 15.8%	2 6.1%	1 2.0%	3 6.0%	0	0	3 6.0%	12 24.0%	8 16.0%	32 8.4% (8.3)
11.	2 4.0%	1 2.4%	0	0	1 14.3%	2 4.0%	1 5.3%	2 4.0%		9 4.3% (4.5)
TOTAL:	9 5.6% (5.8)	12 4.5% (4.2)	5 1.4% (1.5)	10 2.5% (3.2)	6 4.3% (5.7)	11 3.2% (3.0)	12 3.4% (3.8)	33 12.7% (9.7)	12 4.1% (5.7)	110 4.6% (3.3)
M5.	0	1 2.0%	0	2 4.0%	0	2 4.1%	0	0	3 6.0%	8 1.8% (2.3)



Table 41: Numbers and percentages of utterances by target NH children in each integration and M5 session 50U samples which were a reformulation that involved lengthening the utterance (LU) by adding words to emphasise the focus, and means for each target NH child and each session.

CHILD:	LA	SA	EL	SH	WA	KE	JO	CL	TO	TOTAL
SESSN:										*
1.	5 10.0%				0					5 5.0% (7.1)
2.				0				0	0	0
3.					0	6 12.0%	0	1 5.6%	3 11.5%	10 5.8% (5.9)
4.		0	0	1 2.0%	0		0		2 10.0%	3 2.0% (4.0)
5.	4 8.0%	1 2.0%	4 8.0%	2 4.0%	2 6.9%	3 6.0%	0	4 8.0%	0	20 4.8% (3.4)
6.		0	8 16.0%	0	1 7.1%	0	0			9 3.9% (6.6)
7.										
8.	1 2.2%	1 3.7%	5 10.0%	1 2.0%	0	3 6.0%	1 2.0%	2 7.1%	0	14 3.7% (3.4)
9.		1 2.0%	2 4.0%	2 4.0%	4 8.0%	5 10.0%	2 4.0%	5 10.0%	2 4.0%	23 5.8% (3.1)
10.	2 10.5%	0	1 2.0%	0	0	0	4 8.0%	1 2.0%	1 2.0%	9 2.7% (3.9)
11.	2 4.0%	2 4.8%	1 2.0%	1 2.0%	1 14.3%	6 12.0%	1 5.3%	4 8.0%		18 6.6% (4.5)
TOTAL:	14 6.9% (3.7)	5 1.8% (1.9)	21 6.0% (5.7)	7 1.8% (1.7)	8 4.0% (5.2)	23 6.6% (5.1)	8 2.4% (3.1)	17 5.8% (3.6)	8 3.9% (4.9)	111 4.4% (2.0)
M5.	0	0	2 4.0%	4 8.0%	0	2 4.1%	0	2 4.3%	5 10.0%	15 3.4% (3.8)

Table 42: Numbers and percentages of utterances by target NH children in each integration and MS session 50U samples which were a reformulation that involved shortening the utterance (SU) by deleting words which were not essential to the communicative function or by replacing a phrase with a synonymous word, and means for each target NH child and each session.

CHILD:	LA	SA	EL	SH	WA	KE	JO	CL	TO	TOTAL	*
SESSN:											
1.	8 16.0%				0					8 8.0%(11.3)	
2.				0				1 3.7%	1 5.3%	2 3.0%	(2.7)
3.					0	6 12.0%	0	0	0	6 2.4%	(5.4)
4.		0	0 2.0%	1	0		0		1 5.0%	2 1.2%	(2.0)
5.	4 8.0%	3 6.0%	2 4.0%	5 10.0%	0	4 8.0%	1 2.8%	1 2.0%	0	20 4.5%	(3.7)
6.		0	2 4.0%	4 8.0%	1 7.1%	0	0			7 3.2%	(3.7)
7.											
8.	1 2.2%	0	2 4.0%	2 4.0%	0	9 18.0%	1 2.0%	1 3.6%	0	16 3.8%	(5.6)
9.		3 6.0%	7 14.0%	4 8.0%	4 8.0%	0	1 2.0%	6 12.0%	2 4.0%	27 6.8%	(4.8)
10.	3 15.8%	0	8 16.0%	4 8.0%	0	0	4 8.0%	5 10.0%	2 4.0%	26 6.9%	(6.4)
11.	2 4.0%	1 2.4%	6 12.0%	1 2.0%	0	6 12.0%	1 5.3%	1 2.0%		18 5.0%	(4.6)
TOTAL:	18 9.2% (6.5)	7 2.1% (2.8)	27 7.7% (6.2)	21 5.3% (3.7)	5 1.7% (3.3)	25 7.1% (7.3)	8 2.5% (2.9)	15 4.8% (4.5)	6 2.6% (2.5)	132 4.8% (2.7)	
MS.	0	1 2.0%	2 4.0%	4 8.0%	0	4 8.2%	0	1 2.2%	1 2.0%	13 2.9%	(3.2)

Table 43: Number of integration sessions in which particular types of tutoring behaviour occurred in the talk of each target NH child

	LA	SA	EL	SH	WA	KE	JO	CL	TO
Teacher talk modelled	*	**	*	**		**	**	**	*
Sequencing task into small steps	***	**	***	**	**	***	**	***	**
Providing feedback	***	**	***	**		***		***	**
Giving explicit instructions	**		**	**		**		*	

Table 44: Number of sessions in which particular types of dominance occurred in the talk of NH children to SLD partners and number of sessions in which SLD partners tried to assert themselves with NH children.

	LA	SA	EL	SH	WA	KE	JD	CL	TO
Motherese used to SLD child		**	***	**					
				**					
Referring to SLD child in the third person	**	*	**	***			*	*	***
			**	***					**
Protecting the interests of SLD children			*						*
Over-riding SLD child			*	**			*		**
				*					
Showing SLD child's work to adult	**	**	***				**	**	
Providing personal care of SLD child	**	*	***			**	***		**
						**			
Reprimands to SLD children	*	**	**	***			***	*	
			**	***					
Threats to SLD children	*	**	**	**				*	
		**	**						
Appeals to adults for help re. SLD child	*	**	**	***	*	***	**	***	**
							**	**	**
"Private" discourse reporting mis-behaviours of SLD children	***	*	***	**	**		**		**
			**	**			*		
SLD partner asserting self.	**	*	**	**			***		***
			**	**					

\* Denotes number of sessions in which feature occurred.

APPENDIX 2: MATERIALS FOR DATA COLLECTION AND  
SAMPLES OF TRANSCRIPTS

INTEGRATION PROJECT  
Observation Schedule Checklist

315

Date :

Session No :

Observer :

Sheet no :

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Child Number	Composition of group	x action + adults	Target's role	x actee	Mode of action	Nature of contact	Attitude of target	Comments
1.	A. B. G.							
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

## STUDY 2: SEMI-STRUCTURED INTERVIEW SCHEDULES

First interview

Attitudes towards classmates thought to be  
"not very clever"

1. Who's not very clever at things in your class.

(Descriptors)

2. What aren't they very good at.

(Affective attitudes)

3. Do you like them or not like them very much

4. Would you like to be one of those children.

Why/not.

(Descriptors)

5. What are they like /

What kind of children are they.

(Causal factors)

6. Why aren't they very clever at things.

Any other reasons.

7. What has caused them to be that way.

(Volition)

8. Do they want to be like that.

9. Could they change.

Attitudes towards classmates thought to  
need "a lot of help"

10. Who needs lots of help in your class.

(Descriptors)

11. What do they need lots of help with.

(Affective attitudes)

12. Do you like them or not like them very much.

What are they like.

13. What kind of children are they.

14. Would you like to be one of those children.

Why/not.

(Causal factors)

15. What causes them to need a lot of help.  
Why do they need help.
16. Will they always need lots of help.

(Volition)

17. Do they want to be like that.  
Could they change.

(Questions leading into discussion of SLD children)

Do you know anyone else who isn't very good  
at things.  
- in another class.  
- in another school.  
- in your family.  
- near where you live.

Have you had any new children in your class/school.  
Tell me about them.  
Do you like them.  
Would you like to have new children in your class or not.  
Why.

Do you know any children who've got something  
wrong with them.  
They can't walk properly or they can't see properly.



Second interview

## Attitudes towards children with SLD

What do you think about the [Special School]  
children who come here sometimes ?

(Affective attitudes)

18. Do you like them or not like them very much.

(Descriptors)

19. Can you describe some of the [Special School]  
children to me.

Tell me about some children from [Special School].

Tell me about a boy or girl from [Special School].

20. How old do you think the children from [Special  
School] are?

21. Are the [Special School] children the same as you.

22. How.

(Ratings of traits)

23. Do they work hard or not work hard.

Why do you think that.

24. Are they happy/sad....why do you think that.

25. Are they weak/strong...why do you think that.

26. Are they not very clever or clever.

Why do you think that.

27. Are they brave or not very brave.

why do you think that.

28. Are they boring or fun...why do you think that.

29. Are the children from [Special School] different from  
you.

How..

30. What sort of things are they good/

not very good at ...

Why do they find that easy/difficult....

31. Do they need lots of help or

only a little bit of help..

What do they need help with..

What can they do on their own ...

(Affective attitudes)

32. Have you got a special friend in the group  
from [Special School].

Who..

Why is... your special friend.

33. Would you like to have... to tea with you..  
(check re. classmates)
34. Would you like to have... to stay with you..  
(check re. classmates.)
35. Would you like to play with... in the playground..  
(Causal factors)
36. Why do you think the [Special School] children are  
the way they are.  
What made them be like that.  
What caused them to be that way..  
Any other reasons...
- (Prognosis)
37. Will they always be like that..
- (Volition)
38. Do they want to be like that.  
Could they change..
- (Affective attitudes)
39. Would you like to be like that.  
Why/not.
- (Prognosis)
40. What will the [Special School] children be like  
when they grow up.  
What will they be..
41. Will they get a job do you think..
42. What kind of job..
43. Will they live in an ordinary house..
44. What sort of things will they do on  
Saturdays and Sundays..
45. Do you behave the same way to the [Special School]  
children as you do to other children..  
Should you..
46. Do you tell your mum and dad about things  
at school.  
your friends,  
visitors, other children, [Special School]  
children.  
What do your mum and dad say...

## (Descriptors)

47. Do you think the [Special School] school is like this one.
48. Do they have                   reading book.....
49.                               assemblies.....
50.                               playtimes.....
51.                               lessons.....
52.                               dinner ladies.....
53.                               PE.....
54.                               number work.....
55. Tell me some of the things that you remember happening when the [Special School] children have come to your class.

Third interviews: first plus second interview schedules.

STUDY 2: ATTITUDE INTERVIEWS, SAMPLE TRANSCRIPT

Third interview, 23.6.86. KE: age 714 (m).

*Transcription notes:*

(.) denotes pause  
 (words) denotes speech which was unclear  
 [ ] denotes clarificatory information  
 1,etc numbers in second column correspond with  
 question numbers in the interview  
 schedule (see appendix 2).

AL	Can you tell me who you think is clever at	
	things in your class	
KE	(.) MR [m], MW [f], LT [f] (.) and me	
AL	And what sorts of things are you all good at	
KE	(.) Scottish maths (.) English (.)	
AL	Do you like children who are clever at things	
KE	(.) Yes (.)	
AL	What makes them clever at things	
KE	(.) Don't know	
AL	Can you have a guess (.)	
	Why are they clever at things and other children	
	not so clever	
KE	They work hard	
AL	They work hard (.)	
	Do you think they want to be clever at things	
KE	Yes	
AL	1 Who's not very clever at things in your class	
KE	ME [m]	<i>nominative.</i>
AL	2 And what's ME not very good at	
KE	English	
AL	3 And do you like ME	<i>positive</i>
KE	Yes	
AL	Yes (.)	
	You do (.)	
	5 What's ME like (.)	
	What kind of little boy is he	
KE	A nice one	
AL	6 Why isn't ME clever at things	<i>behaviour</i>
KE	Cos he doesn't work hard	
AL	Cos he doesn't work hard (.)	
	7 What's made him be like that	<i>d. know</i>
KE	I don't know	

AL 8 Do you think he wants to be not very clever *validim. low*  
 KE No  
 AL No (.)  
 9 Do you think he could change *prognosis - can change*  
 KE Yes  
 AL 4 Would you like to be one of those children  
 who are not very clever at things  
 KE No  
 AL 10 Who needs a lot of help in your class *invalidim*  
 KE TI [4] and ME [m, same child as named earlier]  
 AL mm (.)  
 11 What do they need a lot of help with  
 KE Working  
 AL With working (.)  
 12 Do you like those children  
 KE Yes  
 AL 13 What kind of children are they *positive behaviour*  
 KE Good  
 AL They're good children ?  
 KE Yes  
 AL 15 What has caused them to need a lot of help (.)  
 Why do they need a lot of help *don't know*  
 KE I don't know  
 AL 16 Do you think they'll always need a lot of help  
 KE No  
 AL 17 Do you think they want to be like that *validim - low*  
 KE No  
 AL Could they change *prognosis - can change*  
 KE Yes  
 AL What would make them change  
 KE Working harder  
 AL 14 Would you like to be one of those children  
 KE No  
 AL Why not  
 KE Because they need a lot of help  
 AL Do you know anyone else who isn't very good at  
 things (.) in another class (.) or in another  
 school  
 KE [shakes head]  
 AL Have you had any new children in your class  
 KE PR  
 AL Do you like having new children  
 KE Sometimes  
 AL Sometimes  
 AL Do you like having PR in your class  
 KE A bit  
 AL A bit  
 KE Why only a bit  
 AL He's naughty sometimes

AL He's naughty sometimes  
Do you know any children who've got something  
wrong with them (.) they can't walk properly  
or they can't see properly  
KE No

AL What do you think about the [Special School]  
children who come here sometimes  
KE I like them  
They're nice

AL 19 Tell me a bit more about them  
KE Some of them can't speak properly  
Some of them can't hear properly  
They're clever sometimes

AL Can you tell me about a boy or a girl from  
[the Special School]

KE T knocks the bricks down  
He's a terror!  
He goes [gestures knocking bricks down]  
(I) got them back up

AL 20 How old do you think the children from [Special  
School] are

KE Five or six

AL Five or six

Do you think the [Special School] children  
21 are the same as you or different  
KE Different

AL 22 How are they different from you  
KE (They're) ~~handicapped~~

AL They're handicapped (.)

What does that mean

KE They aren't the same as us

AL They aren't the same as us

What does that mean

KE They can't hear properly (.)

And they can't talk properly

AL Anything else that's different about them

KE Not that I can think of

AL 23 Do you think they work hard or don't work hard

KE Work hard

AL What makes you say that

KE They have a good time (.)

They like working

AL 24 Do you think they're happy or sad

KE Happy

AL Why do you think they're happy

KE Cos they come to us (.) our school (.) every  
fortnight

*positive*

*physical - sens.  
physical - sens.  
cognitive*

*(mis) behaviour*

*physical - sens.  
physical - sens.*

5

5

AL And you think that makes them happy  
 KE Yes  
 AL 25 Do you think they're weak or strong  
 KE In the middle 3  
 AL A bit weak and a bit strong?  
 KE Yes  
 AL 26 Do you think they're not clever or clever  
 KE Clever  
 AL Clever (.)  
 KE Why do you say they're clever 5  
 AL Like with painting  
 AL Do you think they can paint as well as you  
 KE No  
 AL But you still think they're clever?  
 KE Yes  
 AL 27 Do you think they're brave or not very brave?  
 KE Sometimes they're brave  
 AL Sometimes they're brave (.)  
 KE What sort of brave things do they do 4  
 AL They dress up and they can't see  
 AL They dress up and they can't see  
 [relates to events during session 11]  
 KE Yes  
 AL Why is that brave  
 KE Because you don't know where you're going (.)  
 AL Might bump into something  
 AL Right  
 AL 28 Are they boring or fun  
 KE Fun  
 AL You think they're fun (.)  
 KE Why do you think they're fun 5  
 KE Cos you can help them (.)  
 AL And ~~they can help us~~  
 AL 30 What sort of things are they good at  
 KE Painting and building  
 AL What sort of things are they not very good at physical-motor  
 KE Climbing  
 AL What do they find hard  
 KE Difficult things  
 AL What do they find easy  
 KE Easy things  
 AL Yes (.)  
 AL What do you think are easy things for them physical-motor  
 KE Jumping  
 AL Jumping  
 AL 31 Do they need lots of help or only a little  
 KE A little  
 AL What do they need help with  
 KE Learning things  
 AL (Do they) need help with all learning  
 little help

KE Not all learning (..) just some  
 AL What could they do on their own  
 KE Paint on their own  
 Walk on their own  
 Sleep on their own

AL 32 Have you got a special friend in the group  
 from [Special School]

KE Not really  
 AL Is there one who's your favourite  
 KE No

*No special friends*

AL 33 Would you like to have one of the [Special School]  
 children to tea with you

KE A bit  
 AL 34 Would you like to have one to stay with you  
 KE A bit again

*Not sure*

*Not sure*

AL 35 Would you like to have one to play with you in  
 the playground

KE Yes  
 AL 36 Why do you think the [Special School] children  
 are the way they are

KE They were born that way  
 AL They were born like it?

*physical*

KE Yes  
 AL Any other reasons

KE No  
 AL 38 Do you think they want to be like that

*volition - low*

KE No  
 AL 37 Do you think they could change

KE They might when they grow up  
 AL What will make them change then

KE They'll know more  
 AL 39 Would you like to be the way they are

*prognosis - can  
change*

KE No  
 AL Why not  
 KE Because they're handicapped

AL 40 What will the [Special School] children be like  
 when they grow up

KE Good at things  
 AL Good at things  
 What things will they be good at when they're  
 grown up

KE Writing (..)  
 And reading

AL Will they be as good as you when they're grown up  
 KE They might be

AL 41 Do you think they'll get jobs  
 KE They might do



AL 42 What sort of jobs might they get  
 KE ~~Milkmen~~  
 AL Milkmen?  
 KE {nods}  
 AL Any other jobs  
 KE Can't think of any  
 AL 43 Do you think they'll live in ordinary houses  
 KE Yes

AL 44 What sort of things do you think they'll do  
 on Saturdays and Sundays when they're grown up  
 KE Go out  
 AL Where will they go out to  
 KE Meals  
 AL Go out for meals  
 KE Yes  
 AL Do you think they'll be mums and dads and have  
 children  
 KE Yes  
 AL And what will their children be like  
 KE Same as us  
 AL Same as you?  
 KE Yes

AL 45 Do you behave the same way with the [Special  
 School] children as you do with other children  
 KE Yes  
 AL Do you think you should behave the same with them  
 KE Yes

AL 46 Do you tell your mum and dad about things that  
 happen at school  
 KE Yes  
 AL And have you told them about [Special School]  
 KE Yes  
 AL And what have your mum and dad said about [Special  
 School]  
 KE Nothing much  
 AL Do you think they think it's a good idea  
 KE Yes (.)  
 AL Cos (.)  
 KE We help them (.)  
 AL In a way (.)

AL 47 What do you think the [Special School] is like  
 KE Good  
 AL Do you think it's the same as this one  
 KE No  
 AL How is it different  
 KE Bigger (.)  
 AL Bigger climbing frame (.)  
 AL And it's got a soft area  
 KE Smaller classrooms

*generally not  
 making*

AL Do you think their school is better than this one  
 KE Little bit  
 AL Would you rather go to their school  
 KE Yes  
 AL Why would you rather go to [Special School]  
 KE Cos it's bigger

AL 48 Do you think they have reading books

KE Yes

AL Like yours?

KE No

AL How are they different then

KE (Their's are) little ones

AL 49 Do you think they have assemblies at [Special School]

KE Yes

AL Do you think they're like yours

KE Yes

AL 50 What about playtimes

KE Do you think they have playtimes

KE Yes

AL Yes (.)

51 And lessons ?

KE No

AL What do they do instead of lessons

KE Play (.)

KE Do easy things

AL What sort of easy things

KE They don't do hard sums

AL Not hard sums

52 Do you think they have dinner ladies

KE Yes

AL 53 Do you think they do PE

KE Yes

AL What sort of PE

KE Apparatus the same as us

AL Same as you

54 What about number work

KE Not so hard

AL Do you think the [Special School] children could come here all the time

KE Yes

AL 55 Can you tell me some of the special things that have happened (.)

KE Is there anything special you remember from when [Special School] have come

KE No

AL Has there been something very good happen

KE Last week [session 11]

*books ✓*

*assembly ✓*

*playtime ✓*

*lessons X*

*number ✓*

*dinner ladies ✓*

*P.E. ✓*

AL       What happened last week  
KE       We were playing (.)  
          Dressing up  
AL       Why was that especially good  
KE       You didn't have to do painting again  
          [the focus of nine earlier sessions]  
AL       Have there been any bad things happen  
KE       Yes when the paint fell  
AL       When the paint fell (.)  
          Tell me about that  
KE       Miss A had to get a paper towel (.)  
          And mop it up  
AL       Who knocked it over  
KE       Can't remember  
AL       Can you have a guess who it might have been  
KE       T [Special School boy]

Sample of sheet used for initial transcription  
of NH-BLD/M5 discourseChild's name:Date:

? observation record:

Session no:Page:

Partner =

Mins/secs  
from start  
of tape:Observation  
notes & language  
of others:

Child's language:

Transcription conventions

(Based on: Atkinson and Heritage, 1984)

Emphasis is indicated by underlining:

It's red

Upper case letters are used to indicate part of utterance that is spoken more loudly than surrounding talk:

Sit down NOW

Details of the tone of voice or the context are given in square brackets:

I'll smack you [SH moving towards S]

Talk addressed to people other than SLD/MS partners enclosed in double square brackets:

[[Can we draw now]]

Transcriptionist doubt indicated by single parentheses:

(I'll) do it now

Utterance not decipherable indicated by empty parentheses:

( )

Speech turns omitted from transcription:

Come here

...

Here

Pause within utterances:

You could do (.) yellow

Animated tones:

It's going purple!

STUDY 3: SAMPLE TRANSCRIPT OF DISCOURSE DURING AN  
INTEGRATION SESSION

YEAR 2 1985-86

NH child's name: LA

Date: 21.1.86.

+ observation record: No  
Partner = W (SLD girl)Session no : 5  
Page: 1

Activity: Wax resist painting

-----  
Mins.secs Observation notes &  
from start language of others:  
of tapes

Child's language:

-----  
00.00

00.15

Sit there  
Pull that out  
There we are

00.30

[To SA, NH girl]

[[Oh no, SA, trust you to  
sit there]]I know go and sit there  
Now whose name  
shall we write first shall  
we write L?*(In) Ability assumed*I'll write L  
Because you don't know how to  
spell it (.) do you?

00.45

L (.) L (.) L (.) L  
I can't write it  
L (.) L (.) L (.) L  
I can't do this  
Ooh  
This is hard

.....  
 [Start of 50U sample]

01.00 [To SA, NH girl]	[[SA! I can't write mine Can't see this Go ( ) (.) ask Can hardly see it SA! you can't see it I'm trying to but you can hardly see it Mmm she's trying to make it hard for us I'm still on L I can see that L Now for A Oh (.) Oh Oh no I can't see it]]
01.15 "	
01.45 "	
"	
[To SA/self]	
"	
"	
"	
02.00 "	
[ Mainstream adult: I'll show you (.) can you see LA (.) look (.) and you can see where I've been]	[[ I can't see it anyhow]]
02.15 "	[[ U (.) U (.) U (.) U ]] [sounding out the letters of her name]
02.30	
02.45	
03.00 [To self]	[[ Can't see the L ]] [quietly] [[ Where's the 'a' been?]]
To W	A (.) A (.) A / <i>Mm</i> [more loudly]
03.15	
03.30	I can't hardly see this / <i>Mm</i> I think / -
03.45	Yes we can see that a bit can't we S? / <i>Mm+Dc</i> U (.) U / <i>Mm</i> Now for R / <i>Mm</i> Look how I do R / <i>Reg</i> Hang on (I'll) just (.) look at that bit there / <i>Mm</i>

04.00 Hang on(.)lets have a look / *Ref*  
 L--- yes we can see that / *Mon*  
 [[I'm not putting my second name  
 er (.)you can't hardly see that  
 on the back more]] *Mm*  
 [Reading letters] L--- / *Mm*  
*gmm*  
 04.15 L / (Reading letter) *Mon*  
*Mm*  
 [To adult] [[What shall we do now?  
 What shall we do now?  
 Put my name but (.)  
 I can hardly see it ]]  
 04.45 [Adult : you do a pattern  
 over here]  
 [To W] You do a pattern / *Req*  
 Go over there / *Req*  
 (Ref(LU)) - Go on then do some *Req*  
 patterns there / *Req*  
 05.00 (Ref(SU)) - Do some patterns there / *Req*  
 (Ref(LU)) - Do it in the corner there / *Req*  
 Do any pattern you want / *Req*  
 05.15 Shall I have a go ? / *Qc*  
 W: vocalisation  
 You have a go then / *Req*  
 Go back here / *Req*  
 (Ref(SU)) - Start here / *Req*  
 (Ref(SU)) - No not there / *Req*  
 Start down there / *Req*  
 Dont go / *Req*  
 Dont go past there / *Proh*  
 05.30 Rep. - Do any pattern you want / *Req*  
 Do it down / *Req*  
 Look / *Req*  
 05.45 (Ref(LU)) - Look what you're doing / *Req*  
 Rep. - Look what you're doing / *Req*  
 (Ref(LU)) - Keep looking what you do / *Req*  
 [To NH girl] [[SA(MG) - they do have  
 to be patient don't  
 they? ]]  
 ( )  
 Can I have a go now? / *Qc*



W: Yes

06.00 [Children doing wax resist  
paintings- LA has worked out  
that back of paper will  
06.30 reveal where the white candle  
06.45 wax is.]

07.00

07.15

07.30

08.00

08.15D W: vocalisation  
W: vocalisation

08.30

08.45

.....  
[End of 50U sample]

[To W, SLD girl]  
[SA, NH girl : Yes S  
I think I think]

09.00 [To SA]  
09.15 [To W]  
09.30 [To SA]  
09.45  
10.00 W-vocalisation

Lets ( ) /  
Leta have a look on the back / *Rpt Mon*  
Can hardly see anything /  
I think we d better go  
a bit darker than this  
don't you? / *Rpt+Qc Rpt Mon*  
Hang (on) lets have a look /  
See where we are /

[[I've done this at home it  
comes up]]

Shall we draw like a person? / *Qc*  
No (.) just do a pattern / *Req*  
You need to press on a bit harder / *Mon+ Rpt*  
I think / *Req Mon*  
*Ref (SLU)* - Do the pattern bit harder / *Req Mon*  
Need to finish ( ) /

( )

Fill the spaces up / *Req*

Don't ( ) have to do it  
all over again / *Proh*  
Don't paint over there / *Proh*  
Keep painting in  
different places / *Req*  
Nearly finished / *Mon*

What's your name (.)S?

[[You think, you think, you  
think. ]]  
You've got that crayon

[[SA(.)that's supposed to be our  
paint(.)not yours we asked first  
[[Pardon?]] [? to W or SA]

09.45 paint(,)not yours we asked first  
 10.00 W-vocalisation  
 [To SA] [[Pardon?]] [? to W or SA]  
 10.15 [LA - signs but W's facing  
 away and doesn't see her] [[If you want(,)hold there and  
 help her paint SA]]  
 10.30 S get down  
 S get down  
 [To SA] [[Yours is better than  
 mine(,)it sits down when  
 it's told  
 What's she doing? ]]  
 [SA - she's writing again]  
 10.45 W - I'm writing *I → R*  
*Estimate*  
*of ability?* cor(.)that's come out  
 good  
 You put that by mistake  
 didn't you  
 You have a turn  
 You have a turn  
 I'll show you first  
 Come here  
 Paint all over there  
 Just like that  
 Bit more paint  
 Put your dip in the  
 Paint then paint  
 Paint all over  
 Come on  
 Put it on here  
 11.00  
 11.15  
 11.30 On there  
 I didn't say on my  
 finger!  
 [giggles]  
 Now come on(.) paint on  
 there (,)and down there  
 W: vocalisation  
 11.45 [? to SA again] *10. 15*  
*behaviour?* [[ I told you yours is  
 better than mine ]]  
 Don  
 Let me have a go  
 Let me have a go on my  
 own  
 Let me have a go  
 12.00 Paint there

	Paint all there Put some more paint on S
[ Adult: can you see the pattern? That's 12.15 beautiful]	S S (.) paint down here
12.30	HEY S Paint down here
12.45	Painting all up here Think we'll have to paint there
13.00 W: vocalisation	Can I have a go Let me have a go Bring it over here
13.15	Hang on
13.30	Bring it over here
13.45	
14.00	It's all finished now It's finished Finished All finished now Bring it over here pick it up
14.15	( ) get
14.30[Adult: have you done that, you and S? That's her name - S]	
14.45	
15.00 [to SA] [LA is using the wrong name] [Adult: Don't worry, I'll help you]	( next ) [[I don't know how to spell S]]  Sit there

15.156 (Adult:  
Oh what'm I doing I was  
going to spell S - its not that  
- (to W) - what's your name?)

15.30- W:W

[Adult: You'll have to guide  
her hand]

[[I keep saying S to her]]

Sit down W  
Let's start here

15.45

Sit down  
Hold here  
Help me  
You hold my hand

16.00

W  
W (.1A [writes the  
individual letters of  
W's name])

16.15

16.30

16.45

W  
Let's

17.00

Come on

17.15

*Emphasizing  
there*

We've done something  
~~there~~  
Let's do something  
That across there  
That down there

17.30

Shall ~~we~~ paint over it  
now?

17.45

What colour shall ~~we~~  
use?

Shall we paint over it?  
Shall we paint over it?  
S(.) shall we paint over  
it?

18.00 W: vocalisation

*? Responding  
to  
vocalisation*

Come on then (.) you help  
Do it ~~everywhere~~  
After you've been to  
one place (.) go to *R*  
another

- There  
Bring your paint up
- 18.15 I'll show you
- 18.30 W: vocalisation
- No(,)not over there  
again  
Down here  
Down here
- 18.45
- Come on then  
And up here  
Hang on a minute  
Stop
- 19.00
- Stop  
Let's do more paint  
here
- 19.15 [Adult: that's lovely W]
- Paint here  
Do some more paint  
In there
- 19.30 W: vocalisation
- W(,)dip it in there
- [To NH child?] *mus behaviour / dumsiness* W(,)paint on here
- 17.45
- W(,)paint on here  
[[She's done it all over  
my fingers, covered in  
paint ]]
- 18.00 [Adult - not too much  
paint]  
[To SA]
- W  
Paint here  
Over here(,) W  
[[she keep painting over  
the white bits]]
- 18.15
- W  
W  
Paint here  
W  
Put it in here  
Come  
Over here  
And all up here
- W: vocalisation
- 18.45
- W

19.00 [To NH child?] here  
 [[You can't (do that)  
 because it will come  
 wrong SA]]  
 [[you'll have all  
 scribbling over there]]

W: - look!  
 look! I  
 look!  
 [?trying to gain LA's attention] [laughs]

19.15 Come on  
 Over here

19.30 Um  
 I don't think I want  
 it on my jumper W  
 [giggles]  
 This paint does not  
 come out [said  
 emphatically in 'adult'  
 tone]

[NH girl:  
 you'll have to go and  
 wash it] [[ What, my jumper?  
 You must be joking]]

19.45[?talking to W] Up here  
 Come on then

20.00 Come on  
 We've nearly finished  
 All down here! Come on  
 Phew! W

20.15 W  
 W  
 You can't see your name  
 can you

[To adult] [[She's trying to fill  
 all the  
 white bits in ]]  
 Come on  
 Don't keep painting  
 over there else you'll  
 never get to see your  
 name

20.30

*misbehaviour/  
 clumsiness*

	Look W	
20.45 [To adult]		[[She's got it over my jumper]]
21.00	W: [shouting] [Adult: if you want to do one on your own]	Finished now
		[[Think I'll do one on me own
21.15		I'm going to do one on my own now Like a park or a house or something]]
21.30		
21.45 [To NH girl]		[[SA]]
22.00	[Adult: Don't you ever get messy hands]	[[Sometimes]]
22.15	[Adult- giving new paper]	You do <del>that</del> bit (.) I'll do <del>this</del> piece [[ thank you ]]
22.30	W: vocalisation	Drawing a house
22.45		
23.00	W: vocalisation	
23.15 [To ?]		[[ I'm quite enjoying this]]
	[Adult: That's a lovely house LA What about some trees and some flowers]	
23.30		
23.45		
24.00		umm
24.15 [Adult: asks all children to stop]		

24.30

24.45 [SA : not bad] W (.)you've got to go

25.00 [To NH girl] [[It weren't my idea  
actually ]]

22.15

25.30 [[ I haven't put my name  
on here ]]

22.45 [[ I only have my  
tree to go over ]]

26.00[Adult telling children  
to sit on carpet] [[ I'll leave mine there]]

26.15

*Ref. to JLD*

26.30 [SA:  
I'm quite enjoying  
this, I'm enjoying them] [[ I've had enough of them  
for one day  
Look(,) look (,) I've (,)had enough  
of them (,) for one day]]

26.45 [[ But not W]]

27.00 [[ not when she puts paint  
all over me ]]

27.15[To adult  
[telling him name of teacher] [[Miss A]]

27.30 [[ "hello to you" ]]  
(singing song learned  
at start of session)

28.00

28.15

28.30

[END OF TAPE]



APPENDIX 3: REPRESENTATIVENESS OF 500 SAMPLES IN STUDY 3

STUDY 3:  
REPRESENTATIVENESS OF 50U SAMPLES OF UTTERANCES

The 50U samples were taken from the early parts of sessions. However in some cases, for example where little speech took place during the session or where the recording was brief, the 50U sample constituted total coded data for that session. Elsewhere it formed only a small part of discourse in a session. It may be argued that in such cases 50U sample results may not be representative of total recorded discourse. It is, for example, possible that early parts of sessions were characterised by unusually high levels of requests whereas more collaborative speech developed during the course of individual sessions.

This criticism would apply equally to 50U samples from integration and MS sessions. It is a more serious problem where data across integration sessions are considered as in the early integration sessions, 50U samples did tend to represent total discourse but in later sessions, by which time the target NH children had generally become more voluble, the recorded speech by the target NH child often exceeded 100 utterances (sometimes 300 plus).

In order to examine this, one integration session (9) in which four NH children made at least 100

utterances to their SLD partners has been selected for analysis of intra-session utterances. Session 9 was selected for this analysis because data for that session contained a number of children for whom 100 plus utterances were recorded and activity during that session was typical of most integration sessions (the children worked in pairs on a common task in which they had to locate and assemble coloured jigsaw pieces).

The recorded discourse (session 9) of each of the four children was divided into quarters with equal numbers of utterances in each quarter. The numbers of the two most frequent functional categories (requesting and monitoring) and reformulations and repetitions in each quarter of the session are given in Table 45.

Table 45: Numbers and percentages of utterances in requests, monitors, reformulations and repetitions categories for four target NH children in integration session 9. Quarter sessions based on the division of total utterances in session 9 into four bands containing an equal number of utterances (+/- 1) in each quarter.

SESSION S9					
	1st 1/4	2nd 1/4	3rd 1/4	4th 1/4	Total no. of utterances in S9 session.
Target child:					
E1	1:00-5:30	5:45-14:00	14:15-24:30	24:30-32:00	370
DIR	53(57.6%)	44(47.3%)	43(46.2%)	65(70.7%)	
MON	24(26.1%)	25(26.9%)	30(32.3%)	15(16.3%)	
REFS	22(23.9%)	17(18.3%)	20(21.5%)	19(20.7%)	
REPS	7( 7.6%)	4( 4.3%)	11(11.8%)	7( 7.6%)	
Sh	1:00-4:30	4:30-15:30	15:30-24:00	24:00-28:00	188
DIR	12(25.5%)	12(25.5%)	22(46.8%)	11(23.4%)	
MON	18(38.3%)	16(34.0%)	13(27.7%)	26(55.3%)	
REFS	6(12.8%)	8(17.0%)	9(19.1%)	9(19.1%)	
REPS	1( 2.4%)	4( 8.5%)	1( 2.4%)	4( 8.5%)	
K	1:00-6:00	6:00-16:15	16:30-28:15	28:30-32:00	108
DIR	8(29.6%)	13(48.1%)	8(29.6%)	17(63.0%)	
MON	9(33.3%)	12(44.4%)	10(37.0%)	6(22.0%)	
REFS	1( 3.7%)	4(14.8%)	4(14.8%)	4(14.8%)	
REPS	1( 3.7%)	0	5(18.5%)	4(14.8%)	
C	1:00-4:00	4:00-14:45	15:00-21:15	21:30-32:00	143
DIR	29(82.9%)	19(52.8%)	10(27.8%)	14(38.9%)	
MON	3( 8.6%)	6(16.7%)	1( 2.8%)	0	
REFS	11(31.4%)	6(16.7%)	5(13.9%)	4(11.1%)	
REPS	10(28.6%)	7(19.4%)	0	4(11.1%)	

NOTE : Times denote beginning and end of quartile, timed from commencement of recording in minutes:seconds to nearest 15 seconds. Codings commenced from 1:00 minute after start of the recordings.

Percentages are given as percentages of utterances in relevant quartile.

The intra-session data was collated to assess whether or not systematic changes took place within integration sessions and therefore whether or not the 500 samples were representative of discourse. Friedman tests were carried out on each of the four sets of data for percentages in each quartile of requests, monitors, reformulations and repetitions. The results were as follows:

requests:  $\chi^2 = 1.28$ ,

d.f.=3, N=4, k=4, NS.

monitoring:  $\chi^2 = 2.70$ ,

d.f.=3, N=4, k=4, NS.

reformulations:  $\chi^2 = 0.53$ ,

d.f.=3, N=4, k=4, NS.

repetitions:  $\chi^2 = 0.53$ ,

d.f.=3, N=4, k=4, NS.

These data show that differences between the quartiles in use of the four discourse features were not statistically significant. This indicates that analyses based on data from the first part of a session are not likely to differ significantly on the above four categories from discourse throughout the session.

## REFERENCES:

- Allen, V.L. (1976). *Children as Teachers*. N.Y., Academic Press.
- Anastasiow, N.J., (1984). Handicapped children: peer contacts, relationships or friendships? 209-217 in T. Field, J.L. Roopnarine and M. Segal (eds).
- Arnold, W. and Tremblay, A. (1979). Interaction of deaf and hearing pre-school children. *Journal of Communication Disorders*, 12 245-251.
- Asher, S.R. and Gottman, J.M. (1981) *The Development of Children's Friendships*. Cambridge. Cambridge University Press.
- Asher, S.R., Singleton, L.C., Tinsley, B.R. and Hymel, S. (1979). Brief report- A reliable sociometric measure for pre-school children. *Developmental Psychology*, 15 4 443-444.
- Asher, S. and Taylor, A. (1981) The social outcomes of mainstreaming. *Exceptional Education Quarterly* 2 13-20.
- Atkinson, J.M. and Heritage, J. (1984). *Structures of Social Action* Cambridge, Cambridge University Press.
- Austin, J.L. (1962). *How to Do Things with Words*. Oxford, Oxford University Press.
- Baker, D. and Bovair, K. (in press) *Making Special Schools Ordinary*. Lewes, Falmer.
- Bennett, N., Desforges, C., Cockburn, A. and Wilkinson, B. (1984). *The Quality of Pupil Learning Experiences*. London, Lawrence Erlbaum.
- Berg, J.M. (ed) (1984). *Perspectives and Progress in Mental Retardation. Volume 1: Social, Psychological and Educational Aspects*. Baltimore, University Park Press.
- Beveridge, M. (ed) (1982). *Children Thinking Through Language*. London, Arnold.
- Beveridge, M. and Evans, P. (1978). Classroom interaction: two studies of severely sub-normal children. *Research in Education*, 19 39-48.

- Borke, H. (1971). Egocentricism or empathy? *Developmental Psychology*, 5 2 263-269.
- Brenner, M., Brown, J. and Canter, D. (eds) (1985) *The Research Interview: Uses and Approaches*. London, Academic Press.
- Brinker, R.P. (1985). Interactions between severely mentally retarded students and other students in integrated and segregated public school settings. *American Journal of Mental Deficiency*, 89 6 587-594.
- Brown, D. (1979). *Mother Tongue to English*. Cambridge, Cambridge University Press.
- Bruner, J. and Haste, M. (1987). *Making Senses: The Child's Construction of the World*. London, Methuen.
- Bryant, P. (1974). *Perception and Understanding in Young Children*. London, Methuen.
- Budoff, M. and Siperstein, G.N. (1978). Low income children's attitudes toward mentally retarded children: effects of labelling and academic behaviour. *American Journal of Mental Deficiency*, 82 5 474-479.
- Byrne, E.A., Cunningham, C.C. and Sloper, P. (1988). *Families and their Children with Down's Syndrome: One feature in common*. London, Routledge.
- Cann, A. and Haight, J.M. (1983). Children's perceptions of relative competence in sex-typed occupations. *Sex Roles*, 9 7 767-773.
- Cantrell, V.L. and Prinz, R.J. (1985). Multiple perspectives of rejected, neglected and accepted children: Relation between sociometric status and behavioural characteristics. *Journal of Consulting and Clinical Psychology*, 53 884-889.
- Carpenter, B., Fathers, J., Lewis, A. and Privett, R. (1988) Integrations: the Colleshill Experience. *British Journal of Special Education* 15 3 119-121

- Cavallaro, S.A. and Porter, R.M. (1980). Peer preferences of at risk and normally developing children in a pre-school mainstream classroom. *American Journal of Mental Deficiency*, 84 4 357-366.
- Cazden, C.B., Cox, M., Dickinson, D., Steinberg, Z. and Stone, C. (1979) "You all gonna hafta listen": Peer tutoring in a primary classroom, in W.A. Collins (ed).
- Certo, N., Haring, N. and York, R. (eds) (1984). *Public School Integration of Severely Handicapped Students* Baltimore, Brooks.
- Collins, W.A. (ed) *Children's Language and Communication* Minnesota Symposium on Child Psychology. Vol. 12. Hillsdale, N.J., Lawrence Erlbaum.
- Collis, G., Lewis, A. and Lewis, V. (1988). *Proceedings of the Child Language Seminar 1988*. University of Warwick.
- Cooper, C., Ayers-Lopez, S. and Marquis, A. (1980). Children's discourse in cooperative and didactic interaction: developmental patterns in effective learning. Research Report, Austin, Texas University.
- Cooper, C., Ayers-Lopez, S. and Marquis, A. (1982). Children's discourse during peer learning in experimental and naturalistic situations. *Discourse Processes*, 5 177-191.
- Coulthard, M. (1985). *An Introduction to Discourse Analysis*. 2nd edition. London, Longman.
- Cox, M. (1986) *The Child's Point of View*. Brighton, Harvester Press.
- Cross, T.G. (1977). Mothers' speech adjustments: the contributions of selected listener variables, 151-188 in C.L. Snow and C.A. Ferguson (eds).
- Davey, A. (1983). *Learning to be Prejudiced*. London, Edward Arnold.
- Donaldson, J. (1980). Changing attitudes towards handicapped persons: a review and analysis of research. *Exceptional Children*, 46 7 504-514.



- Donaldson, M. (1978). *Children's Minds*. Glasgow, Collins/Fontana.
- Dore, J. (1986). The development of conversational competence, 3-60 in R.L. Schiefelbusch (ed).
- Dunlop, K.H., Stoneman, Z. and Cantrell, M.L. (1980). Social interaction of exceptional and other children in a mainstreamed pre-school setting. *Exceptional Children*, 47 2 132-143.
- Dunn, J. and Kendrick, C. (1982). *Siblings: Love, Envy and Understanding*. Cambridge, Mass; Harvard University Press.
- Durkin, K. (ed) (1986). *Language Development in the School Years*. London, Croom Helm.
- Edwards, A.D. and Westgate, D.P.G. (1987). *Investigating Classroom Talk*. London, Falmer.
- Eiser, J.R. (1980). *Cognitive Social Psychology*. Maidenhead, McGraw-Hill.
- Ervin-Tripp, S. and Mitchell-Kernan, C. (eds) (1977). *Child Discourse*. New York, Academic Press.
- Ervin-Tripp, S. and Gordon, D. (1986). The development of requests, 61-95 in R.L. Schiefelbusch (ed).
- Esposito, B.G. and Peach, W.J. (1983). Changing attitudes of pre-school children towards handicapped persons. *Exceptional Children*, 49 4 361-363.
- Evans, M. (1986). The effects of different interview styles on the quality of child language data, 297-325 in *Proceedings of the Child Language Seminar 1986* University of Durham.
- Faught, K.K., Balleweg, B.J., Crow, R.J. and Van der Pol, R.A. (1983). An analysis of social behaviours among handicapped and non-handicapped pre-school children. *Education and Training of the Mentally Retarded*, 18 3 210-214.
- Feldman, R.S. (1986). *The Social Psychology of Education*. Cambridge, Cambridge University Press.

- Fellemann, E.S., Carlson, C.R., Barden, R.C., Rosenberg, L. and Masters, J.C. (1983). Children's and adults' recognition of spontaneous and posed emotional expressions in young children. *Developmental Psychology*, 19 3 405-413.
- Field, T., Roonparine, J.L. and Segal, M. (1984). *Friendships in Normal and Handicapped Children*. Norwood, N.J.: Ablex.
- Fenrick, N.J. and Petersen, T.K. (1984). Developing positive changes in attitude toward moderately severely handicapped. *Education and Training of the Mentally Retarded*, 19 2 83-90.
- Fletcher, P. and Garman, M. (eds) (1986). *Language Acquisition: Studies in First Language Development*. 2nd edition. Cambridge, Cambridge University Press.
- Fletcher, P., Garman, M., Johnson, M., Schelleter, C. and Stodel, L. (1986). Towards a grammatically-based characterisation of normal and abnormal language development in pre-school and school age children. 224-238 in *Proceedings of the Child Language Seminar 1986*. University of Durham.
- Forrester, M. (1988). Personal communication re. Maras and Forrester, research note: Attitudes of nine and ten year old non-handicapped children towards peers with SLD in integrated, semi-integrated and non-integrated schools. Institute of Social and Applied Psychology, University of Kent.
- Friedman, R.C., Richart, R.M. and Vande Wiele, R.L. (1974). *Sex Differences in Behaviour*. New York, Wiley.
- Galton, M., Simon, B. and Croll, P. (1980). *Inside the Primary Classroom*. London, Routledge and Kegan Paul.
- Garvey, C. (1984). *Children's Talk*. Oxford, Fontana.
- Garvey, C. and Bendebba, M. (1974). Effects of age, sex and partner on children's dyadic speech. *Child Development*, 45 1159-1161.
- Garvey, C. and Hogan, R. (1973) Social speech and social interaction. *Child Development*, 44 562-568.

- Betty, L.D. and Cann, A. (1981). Children's perceptions of occupational sex stereotypes. *Sex Roles*, 7 301-308.
- Glynn, T. (1985). Contexts for independent learning. *Educational Psychology*, 5 1 5-15.
- Goodwin, M. Harness. (1987) Conversational practices in a peer group of urban black children. Unpublished manuscript, Indiana University Press.
- Gottlieb, J. and Leyser, Y. (1981). Friendship between mentally retarded and non-retarded children, 150-181 in S.R. Asher and J.M. Gottman (eds).
- Gottlieb, J. and Switzky, H.N. (1982) Development of school age children's stereotypic attitudes towards mentally retarded children. *American Journal of Mental Deficiency* 86 6 596-600.
- Greenspan, S., Barenboim, C. and Chandler, M.J. (1976). Empathy and pseudo-empathy: the affective judgements of first and third graders. *Journal of Genetic Psychology*, 129 77-88.
- Griffiths, P., Local, J. and Mills, A. (eds) (1987) *Proceedings of the Child Language Seminar 1987* University of York.
- Guralnick, M.J. (ed) (1978). *Early Intervention and the Integration of Handicapped and Non-handicapped Children*. Baltimore, University Park Press.
- Guralnick, M.J. (1980). Social interactions among pre-school children. *Exceptional Children*, 46 4 248-253.
- Guralnick, M.J. (1986). The peer relations of young handicapped and non-handicapped children, 93-142 in P.S. Strain, M.J. Guralnick and H.M. Walker (eds).
- Guralnick, M.J. and Paul-Brown, D. (1977). The nature of verbal interaction among handicapped and non-handicapped pre-school children. *Child Development*, 48 254-260.
- Guralnick, M.J. and Paul-Brown, D. (1980). Functional and discourse analyses of non-handicapped pre-school children's speech to handicapped children. *American Journal of Mental Deficiency*, 84 5 444-454.
- Guralnick, M.J. and Paul-Brown, D. (1984). Communicative adjustments during behaviour-request episodes among children at different developmental levels. *Child Development*, 55 911-919.

- Hartup, W. (1976). Cross-age versus same-age peer interactions: ethological and cross-cultural perspectives, 41-56 in V.L. Allen (ed).
- Hartup, W.W. (1978). Peer interaction and the process of socialisation, 27-51 in M.J. Guralnick (ed).
- Hartup, W.W., Brady, J.E. and Newcomb, A.F. (1983). Social cognition and social interaction in childhood, 82-109 in E.T. Higgins, D.N. Ruble and W.W. Hartup (eds).
- Hazzard, A. (1983). Children's experience with, knowledge of, and attitudes toward disabled persons. *Journal of Special Education*, 17 2 131-139.
- Higgins, E.T., Ruble, D.N. and Hartup, W.W. (1983). *Social Cognition and Social Development*. Cambridge, Cambridge University Press.
- Horne, M.D. (1985). *Attitudes toward Handicapped Students: Professional, Peer and Parent Reactions*. Hillsdale, N.J.; Lawrence Erlbaum.
- Ispa, J. and Matz, R.D. (1978) Integrating handicapped pre-school children within a cognitively oriented programme, 167-190 in M.J. Guralnick (ed).
- Jenkinson, J.C. (1983). Correlates of socio-metric status among TMR children in regular classrooms. *American Journal of Mental Deficiency*, 88 3 332-335.
- Johnson, D.N., Johnson, R.T. and Maruyama, G. (1983). Interdependence and inter-personal attraction among heterogeneous and homogeneous individuals: A theoretical formulation and meta-analysis of the research. *Review of Educational Research*, 53 1 5-54.
- Jowett, S., Hegarty, S. and Moses, D. (1988) *Joining Forces*, Windsor, NFER/Nelson.
- Karmiloff-Smith, A. (1986). Some fundamental aspects of language development after age 5, 455-474 in P. Fletcher and M. Garman (eds).
- Katz, P.A. (1982). Development of children's racial awareness and inter-group attitudes, 17-54 in L.G. Katz (ed). *Current Topics in Early Childhood*

Education. Norwood, N.J.: Ablex.

- Kohl, F.L., Moses, L.G. and Strattner-Eaton, B.A. (1984) A systematic training programme for teaching non-handicapped students to be instructional trainers of severely handicapped schoolmates, 185-196 in N. Certo, N. Haring and R. York (eds).
- Kohlberg, L. and Ullian, D.Z. (1974) Stages in the development of psycho-sexual concepts and attitudes, in R.C. Friedman, R.M. Richart and R.L. Vande Wiele (eds).
- Kutner, B. (1958). Patterns of mental functioning associated with prejudice in children. *Psychology Monographs*, 72 460.
- Lewis, A. (1986) Meeting special needs in infant classes: A discussion of evidence from HMI reports on individual schools. *School Organisation* 6 2 245-255.
- Lewis, A. (1987). Modification of discourse strategies by mainstream 6-7 year olds towards peers with severe learning difficulties. 169-180 in P. Griffiths, J. Local and A. Mills (eds)
- Lewis, A. and Carpenter, B. (1988). Integration for children with severe learning difficulties: Discourse between six and seven year old non-handicapped children and peers with severe learning difficulties. Paper presented at the 8th IASSMD Congress (Trinity College, Dublin) and to be published in proceedings of the Congress (ed) W.I. Fraser.
- Lewis, A. and Lewis, V. (1987). The attitudes of young children towards peers with severe learning difficulties. *British Journal of Developmental Psychology*, 5 3 287-292.
- Lewis, A. and Lewis, V. (1988). Young children's attitudes, after a period of integration, towards peers with severe learning difficulties. *European Journal of Special Needs Education*. To be published September 1988.
- Light, P. (1987). Taking roles. 41-61 in J. Bruner and M. Haste (eds).
- Light, P. and Glachan, M. (1985) Facilitation of individual problem solving through peer interaction. *Educational Psychology* 5 217-225.

- Little, A. (1985). The child's understanding of the causes of academic success and failure: A case study of British children. *British Journal of Educational Psychology*, 55 11-23.
- Livesley, W.J. and Bromley, D.B. (1973). *Person Perception in Childhood and Adolescence*. London, Wiley.
- Lloyd, P. (1982). Talking to some purpose. 196-215 in M. Beveridge (ed).
- Lougee, M.D., Grueneich, R. and Hartup, W.W. (1977). Social interaction in same and mixed-age dyads of pre-school children. *Child Development*, 48 1353-1361.
- Lynas, W. (1986) *Integrating the Handicapped into Ordinary Schools: A study of hearing impaired pupils*. London, Croom Helm.
- McConkey, R. and McCormack, B. (1984). Changing attitudes to people who are disabled. *Mental Handicap*, 12 112-114.
- MacLure, M., Phillips, T. and Wilkinson, A. (eds) (1988). *Oracy Matters*. Milton Keynes, Open University Press.
- McGurk, H. (1978). *Issues in Childhood Social Development*. London, Methuen.
- McTear, M. (1985). *Children's Conversation*. Oxford, Blackwell.
- Maas, E., Maracek, E. and Travers, J.R. (1978). Children's conceptions of disordered behaviour. *Child Development*, 49 146-154.
- Madden, N.A. and Slavin, R.E. (1983). Effects of cooperative learning on the social acceptance of mainstreamed academically handicapped students. *Journal of Special Education*, 17 2 171-182.
- Maratsos, M.P. (1973). Non-egocentric abilities in pre-school children. *Child Development*, 44 697-700.
- Masur, E.F. (1978). Preschool boys' speech

- modifications: The effect of listeners' linguistic levels and conversational responsiveness. *Child Development*, 49 924-927.
- Mayor, B.M. and Pugh, A.K. (eds) (1987). *Language, Communication and Education*. London, Croom Helm/Open University.
- Merritt, M. (1982). Repeats and reformulations in primary classrooms as windows on the nature of talk engagement. *Discourse Processes*, 5 127-145.
- Midlarsky, E. and Hannah, M.E. (1985). Competence, reticence and helping in children and adolescents. *Developmental Psychology*, 21 3 534-541.
- Milner, D. (1975). *Children and Race*. Harmondsworth, Penguin.
- Mitchell-Kernan, C. and Kernan, K.T. (1977). Pragmatics of directive force among children, in S. Ervin-Tripp and C. Mitchell-Kernan (eds).
- Mittler, P. and Farrell, P. (1987) Can children with severe learning difficulties be educated in ordinary schools. *European Journal of Special Needs Education*, 2 4 221-236.
- Mueller, E. (1972). The maintenance of verbal exchanges between young children. *Child Development*, 43 930-938.
- Nash, R. (1973). *Classrooms Observed*. London, Routledge and Kegan Paul.
- Oden, S. (1982). Peer relationship development in childhood, 87-117 in L.G. Katz (ed).
- O'Keefe, E.S. and Hyde, J.S. (1983). The development of educational sex role stereotypes: the effects of gender stability and age. *Sex Roles*, 9 4 481-492.
- Overall, J.E. and Spiegel, D.K. (1969) Concerning least squares analysis of experimental data. *Psychological Bulletin*, 72 311-322.
- Pearl, R. (1985). Children's understanding of others' need for help: effects of problem explicitness and type. *Child Development*, 56 735-745.
- Peterson, L. (1983). Influence of age, task competence and responsibility focus on children's altruism. *Developmental Psychology*, 19 1 141-148.

- Peterson, N.L. and Haralick, J.G. (1977). Integration of handicapped and non-handicapped pre-schoolers: an analysis of play behaviour. *Education and Training of the Mentally Retarded*, 12 235-245.
- Phillips, D.C. and Kelly, M.E. (1975). Hierarchical theories of development in education and psychology. *Harvard Educational Review*, 45 3 351-375.
- Phillips, T. (1987). Beyond lip service: Discourse development after the age of nine. 371-392 in B.M. Mayor and A.K.Pugh.
- Pieterse, M. and Center, Y. (1984). The integration of eight Down's syndrome children into regular schools. *Australia and New Zealand Journal of Developmental Disabilities*, 10 1 11-20.
- Porter, R., Ramsey, B., Tremblay, A., Iacobo, M. and Crawley, S. (1978). Social interactions in heterogeneous groups of retarded and normally developing children: an observational study, in G.P. Sackett (ed).
- Potter, J. and Wetherell, M. (1987) *Discourse and Social Psychology* London, Sage.
- Proshansky, M. (1966). The development of inter-group attitudes, in I.W. Hoffman and M.L. Hoffman (eds).
- Ripich, D.N. and Spinelli, F.M. (1985). *School Discourse Processes*. London, Taylor and Francis.
- Robinson, E.J. and Robinson, W.P. (1977). Children's explanations of failure and the inadequacy of the misunderstood message. *Developmental Psychology*, 13 151-161.
- Robinson, E.J. and Robinson, W.P. (1986). Learning about verbal referential communication in the early school years, 155-171 in K. Durkin (ed).
- Robinson, E.J. and Whittaker, E.J. (1986) Learning about verbal referential communication in the early school years, 155-171 in K. Durkin (ed).
- Rogers, C. (1978). *The Child's Perception of other People*. 107-129 in M. McGurk (ed).



- Romaine, S. (1984). *The Language of Children and Adolescents; The acquisition of communicative competence*. Oxford, Blackwell.
- Ross, C.D. (1981). Social integration of school age ESN(S) children in a regular school. *Special Education: Forward Trends*, 8 4 17-22.
- Rubin, K.H. (1982) Social and social-cognitive development of young isolate, normal and sociable children, in K.H. Rubin and H.S. Ross (eds).
- Rubin, K.H. and Ross, H.S. (eds) (1982) *Peer Relationships and Social Skills in Children*. New York, Springer-Verlag.
- Rumsey, N., Bull, R. and Gahagan, D. (1986). A developmental study of children's stereotyping of facially deformed adults. *British Journal of Psychology*, 77 269-274.
- Rynders, J., Johnson, R.T., Johnson, D.W. and Schmidt, B. (1980). Producing positive interaction among Down's syndrome and non-handicapped teenagers through cooperative goal structuring. *American Journal of Mental Deficiency*, 85 3 268-273.
- Sackett, G.P. (ed) (1978). *Observing Behaviour: Volume 2, Data collection and analysis methods*. Baltimore, University Park Press.
- Scherrer, K. (1984). Die beziehung zwischen einstellungstestverhalten und realverhalten in arbeiten der behindertenforschung. (The relationship between attitude test behaviour and actual behaviour in the works of the handicapped research.) *Vierteljahresschrift für heilpädagogik und ihre nachbarggebiete*, 53 1 66-74
- Schefelbusch, R.L. (ed) (1986). *Language Competence: Assessment and Intervention*. London, Taylor and Francis.
- Schutz, R.P., Williams, W. Salce Iverson Z.G. and Duncan, D. (1984). Social integration of severely handicapped students, 15-42 in N. Certo et al. (eds).
- Sebba, J. (1983) Social interactions among pre-school handicapped and non-handicapped children. *Journal of Mental Deficiency Research*, 27 115-124.

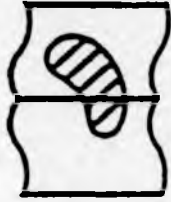
- Sharpley, C.F. and Rodd, J. (1983). The effect of real versus hypothetical stimuli upon pre-school children's helping behaviour. *Early Childhood Development and Care*, 22 4 303-313.
- Shatz, M. and Gelman, R. (1973). The development of communication skills: modification in the speech of young children as a function of the listener. *Monograph of the Society for Research in Child Development*, 38 5 1-36.
- Siegal, L.S., Cunningham, C.E. and Van der Spuy, M.I.J. (1985). Interactions of language-delayed and normal pre-school boys with their peers. *Journal of Child Psychology and Psychiatry*, 26 1 77-83.
- Sinson, J.C. and Wetherick, N.E. (1981). The behaviour of children with Down's syndrome in normal playgroups. *Journal of Mental Deficiency Research*, 25 113-120.
- Slaby, R.G. and Frey, K.S. (1975). Development of gender constancy and selective attention to same sex models. *Child Development*, 46 849-856.
- Slavin, R.E. (1986). Cooperative learning: engineering social psychology in the classroom, 153-171 in R.S. Feldman (ed).
- Slavin, R.E. and Madden, N.A. (1986). The integration of students with mild academic handicaps into regular classrooms. *Prospects*, 16 4 443-461.
- Snow, C.L. and Ferguson, C.A. (1977) *Talking to Children* Cambridge, Cambridge University Press.
- Spence, S.H. (1987). The relationship between social-cognitive skills and peer sociometric status. *British Journal of Developmental Psychology*, 5 347-356.
- Spinelli, F.M. and Ripich, D.N. (1985). A comparison of classroom and clinical discourse, 179-198 in D.N. Ripich and F.M. Spinelli (eds).
- Stainback, W. and Stainback, S. (1982). Non-handicapped students' perceptions of severely handicapped students. *Education and Training of the Mentally Retarded*, 17 177-182.

- Strain, P.S. (1983). Identification of social skill curriculum targets for severely handicapped children in mainstream pre-schools. *Applied Research in Mental Retardation*, 4 4 369-382.
- Strain, P. (1984). Social behaviour patterns of non-handicapped and developmentally disabled friend pairs in mainstream pre-schools. *Analysis and Intervention in Developmental Disabilities*, 4 1 15-28.
- Strain, P.S., Guralnick, M.J. and Walker, H.M. (1986). *Children's Social Behaviour: Development, Assessment and Modification*. Orlando, Academic Press.
- Strain, P.S. and Shores, R.E. (1983). A reply to 'Misguided mainstreaming'. *Exceptional Children*, 50 3 271-273.
- Stubbs, M. (1983). *Discourse Analysis: The sociolinguistic analysis of natural language*. Oxford, Blackwell.
- Sylva, K., Roy, C. and Painter, M. (1980). *Childwatching at Playgroup and Nursery School*. London, Grant McIntyre.
- Swann, W. (1978). On shared knowledge: teachers and severely subnormal children. *British Journal of Educational Psychology*, 48 340-350.
- Tattershall, S. and Creaghead, N. (1985). A comparison of communication at home and at school, 29-52 in D.N. Ripich and F.M. Spinelli.
- Taylor, T.J. and Cameron, D. (1987). *Analysing conversations: Rules and units in the structure of talk*. Oxford, Pergamon.
- Terrell, B.Y. (1985). Learning the rules of the game: discourse skills in early childhood, 13-28 in D.N. Ripich and F.M. Spinelli.
- Tomlinson, S. (1982). *A Sociology of Special Education*. London, Routledge and Kegan Paul.
- Topping, K. (1988). *The Peer Tutoring Handbook*. London, Croom Helm.

- Towfiguey-Hooshyar, N. and Zingle, H.W. (1984). Regular class students' attitudes toward integrated multiply handicapped peers. *American Journal of Mental Deficiency*, 88 6 630-637.
- Turabian, K.L. (1987). *A Manual for writers of term papers, theses and dissertations*. 5th edition, London, University of Chicago Press.
- Turiel, E. (1983). *The development of Social Knowledge*. Cambridge, Cambridge University Press.
- Vandell, D.L. and George, L.B. (1981). Social interaction in hearing and deaf pre-schoolers: successes and failures in initiations. *Child Development*, 52 627-635.
- Voeltz, L.M. (1980). Children's attitudes toward handicapped peers. *American Journal of Mental Deficiency*, 84 5 455-464.
- Voeltz, L.M. (1982). Effects of structured interactions with severely handicapped peers on children's attitudes. *American Journal of Mental Deficiency*, 86 4 380-390.
- Voeltz, L.M. and Brennan, J. (1984). Analysis of interactions between non-handicapped and severely handicapped peers using multiple measures, 61-72 in J.M.Berg (ed).
- Vygotsky, L.S. (1962). *Thought and Language* New York, Wiley.
- Waller, G. and Harris, P.L. (1988). Who's going where? Route descriptions for peers and younger children. *British Journal of Developmental Psychology*, 6 2 137-144.
- Warton, P. and Bussey, K. (1988). Assisted learning: levels of support. *British Journal of Developmental Psychology*, 6 2 113-124.
- Wells, G. (1985) *Language Development in the Pre-school Years*. Cambridge, Cambridge University Press.
- Westervelt, V.D., Brantley, J. and Ware, W. (1983). Changing children's attitudes towards physically handicapped peers. *Journal of Paediatric Psychology*, 8 4 327-343.

- Widdowson, H.G. (1984). *Explorations in Applied Linguistics 2*. Oxford, Oxford University Press.
- Wilkinson, L. (1984). Research currents: peer group talk in elementary school. *Language Arts*, 61 164-169.
- Willes, M. (1983). *Children into Pupils*. London, Routledge and Kegan Paul.
- Wood, D. (1988). *How Children Think and Learn*. Oxford, Blackwell.
- Wood, D., Bruner, J.S. and Ross, G. (1976) The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry* 17 2 89-100.
- Wood, D., Wood, H. Griffiths, A. and Howarth, I. (1986). *Teaching and Talking with Deaf Children*. Chichester, Wiley.
- Woollett, A. (1986). The influence of older siblings on the language environment of young children. *British Journal of Developmental Psychology*, 4 235-245.
- Wootton, A. (1988). *Order sequences between parents and young Down's children*. Paper presented to the Child Language Seminar 1988, reprinted in G. Collis, A. Lewis and V. Lewis (eds).
- Zakay, D. (1985). The influence of information and daily contact on children's attitudes towards aphasic children. *British Journal of Educational Psychology*, 55 1-10.

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INTERACTION BETWEEN NON-HANDICAPPED SIX AND  
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SEVERE LEARNING DIFFICULTIES

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